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FONETICKÝ VÝVOJ ANGLIČTINY, NIZOZEMŠTINY A NĚMČINY A JEJICH VZÁJEMNÁ KOMPARACE

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DEVELOPMENT OF PHONETICS OF ENGLISH, DUTCH AND GERMAN LANGUAGE AND THEIR COMPARISON

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Prohlašuji, že jsem práci vypracoval samostatně s použitím uvedené literatury a zdrojů informací.

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Abstract

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This undergraduate thesis deals with the three most dominant West Germanic languages – English, Dutch and German – and their historical development with respect to their phonologic systems and the orthographic realizations of the individual phonemes.

For a sufficient context, the development is described from the most general initial period, the Proto-Indo-European language, chronologically onwards with brief information about other closely related languages. The development of the individual languages, sorted firstly German, secondly Dutch and finally English, is described chronologically by the consecutive periods. Included are the chapters on the processes of languages' standardization and the dialects and other language varieties, given the pluricentric attribute of all of them.

The described phonological innovations are summarized in the beginning of the analysis, in which they are demonstrated on basic words of Germanic origin from the core of the languages' vocabulary with respect to the phonemic structure of the words.

Given the historical proximity of the languages and shared ancestry, using analogies between the same phonetic phenomena might help to overall better understanding among the languages as well as to proper explanation of the differences, which occurred during the process of their development.

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2. Introduction

This thesis deals with three West Germanic languages – German, Dutch and English, and their development with respect to their phonologic systems and orthography. The main objective is the description of the individual languages' development and their contemporary phonetic systems, which are the background for the analysis part, in which the distinctive features are demonstrated on suitable word examples and compared with each other.

In the course of the thesis are for sufficient genealogic context discussed also the common history from the earliest stages beginning with the Indo-European language tree, common Germanic languages' features and further subdivision, recent North Germanic languages, common West Germanic development and its three branches and brief information regarding the minor West Germanic languages. The major ones – German, Dutch and English – were chosen in order to demonstrate each of the three branches of West Germanic languages as the most prominent and widespread representatives. Development of each of the languages is described in the chronological order with respect to the traditional division of the development periods, as well as the standardization process and the dialects and language varieties, eventually creoles and pidgins. Finally, the phonetic systems of the languages are enlisted with the most common orthographic denotations and complementary notes. The distinctive phenomena of the languages are summarized in the beginning of the analysis part of the thesis and suitable examples of words for them are given, with the respect to their phonemic material and Germanic origin.

The main research question therefore are:

- Which were the most important distinctive phenomena of the individual languages?
- How are the changes reflected in the orthography of the languages?
- Can be formulated any generalizing statements based on the analogies in the phenomena development?

The most important information about the languages' prominent distinctive features and the overall relations are summarised in the conclusion chapter in the end of the thesis.

3. Theoretical background

3.1 Germanic languages' genealogy

Germanic languages are one of the branches of the Indo-European language family, the most widespread language family in the world. It includes eight dominant branches (seven more being already extinct) with the total of about 446 languages according to Ethnologue. These eight branches include Indo-Iranian languages (spoken mostly in Iran and parts of southern Asia), Armenian (with its dominant eastern branch spoken in the Republic of Armenia), Hellenic (with Standard Greek being the only major one), Albanian (in the Republic of Albania, the disputed territory of Kosovo and western part of Republic of North Macedonia), Italic/Romance languages (developed from Latin, originally spoken mostly throughout southern Europe), Celtic languages (today spoken on the British Isles and Brittany region of France), Balto-Slavic languages – including Baltic languages spoken in Latvia and Lithuania as well as Slavic languages spoken throughout Central, South-Eastern and Eastern Europe and finally Germanic languages, originally spoken in Western and Northern Europe.

All Indo-European languages started from a hypothetic single language, commonly referred to as Proto-Indo-European, which is believed to be spoken millennia years ago, probably around 4500 to 2500 BC, according the Archaeological Institute of America citing Powel, Eric A.. Throughout the time, single branches of PIE (common abbreviation used for the term "Proto-Indo-European") started to develop individually, giving way to their ancestor languages which are today referred to with the suffix "Proto-" plus the name of the language branch and which are as well treated as hypothetic, in order to understand relations and common features within the branches.

The branches of Indo-European language family can be sorted into two sub-groups: „centum"-languages and „satem"-languages, according to how did the dorsal consonants (labiovelars, plain velars and palato-velars), other described as „k-consonants" change. Both the terms are the root words from which the expressions of the number „100" developed in respective languages.
In the „centum"-languages, plain velars merged with palate-velars and labiovelars remained the same, therefore in the word „centum" from Latin appears /k/ as the initial consonant. Besides Latin and other Italic languages, belong here Hellenic languages (see „εκατό" [ɛkato:] in Greek), Celtic languages (see „céad" in Irish) and Germanic languages (see „hundred" in English – the change from [k] to [x] will be explained later).

In the „satem“-languages however, labiovelars merged with plain velars and lost their labial element, whereas palate-velars became assibilated. Therefore in the word „satem“ from Avestan language appear /s/ as the initial consonant and in other languages various sibilants appear. Besides Indo-Iranian languages belong here also Albanian (see „qind“ [ʧind]), Armenian („հարյուր“ [harjur]) and Balto-Slavic languages (see „šimtas“ in Lithuanian and „сто" [sto] in all Slavic languages.

The Proto-Germanic language began to differ sometime probably during the first half of the 1st millennium BC, Ringe (2006), p.67. speculates, that Proto-Germanic was already spoken by 500 BC before the start of the migration period of Germanic tribes to the south from southern Scandinavia (Denmark and southern Sweden), which are believed to be the initial habitat of Germanic people according to Encyclopaedia Britannica.

The major distinctive feature of Proto-Germanic language was the series of consonant changes known as Grimm's law and Verner's law, otherwise known as First Germanic Sound Shift. The Grimm's law, named after a German philologist Jacob Grimm, suggests regular non-trivial corresponding changes in Proto-Germanic as opposed to other „centum“-Indo-European languages, and thus three consecutive phases in the sense of a chain shift. These phases include:

1) PIE voiceless stops become voiceless fricatives
2) PIE voiced stops become voiceless stops.
3) PIE voiced aspirated stops become voiced stops (or fricatives as allophones)

The phases are supposed to happen in the reversed order, and thus first the de-aspiration, then voicing loss and finally becoming fricatives. Demonstrated on particular sounds:

bilabials:	[b^h]	> [b]	> [p]	> [f] (or [ɸ] as allophone)
dentals:	[d^h]	> [d]	> [t]	> [þ]
velars:	[g^h]	> [g]	> [k]	> [x]
labiovelars:	[g^{wh}]	> [g^w]	> [k^w]	> [x^w]

The Verner's law, named after a Danish linguist Karl Verner, subsequently suggests a solution for problem of some consonants (mostly word-internal and following an unstressed syllable) becoming voiced, in contradiction with the outcome of Grimm's law to be voiceless. The most credible scenario suggests this change to happen after the full completion of Grimm's law. Moreover, the Verner's law would apply for the sibilant [s] becoming its voiced counterpart [z] the same way and subsequently rhotacized to become [r] in some inflectional paradigms, known under its German term "grammatischer Wechsel“ (lit.

:grammatical alteration“). The sound changes might be demonstrated hereby, with the first change being the result of Grimm’s law and the second change the result of Verner’s law:

bilabials:	[b^h]	> [f/ɸ]	> [β]	
dentals:	[d^h]	> [þ]	> [ð]	
velars:	[g^h]	> [x]	> [ɣ]	
labiovelars:	[g^{wh}]	> [x^w]	> [$ɣ^w$]	
sibilant:	[s]	> [s]	> [z]	(> [r] as a result of grammatischer Wechsel)

It has to be taken into consideration, that all the changes mentioned until here are retrospectively reconstructed by the 19th century linguists, since no written sources may exist due to the fact that Germanic people did not use any form of script or written language by that time. Therefore no precise data can be fully verified as further as the first written sources by Roman historians denoting the names of people or places during the contact between the two cultures initiated in the 1st century BC, from which the already implemented changes may be evident.

During the first centuries AD Germanic people migrated through the Central Europe on the territory spanning from the mouth of Rhine on the west as far as today’s Ukraine to the east. Probably in the 3rd century AD and certainly prior to the beginning of the migration period (otherwise known as „Barbaric Invasions“ from the Roman and Greek point of view), the Proto-Germanic language began to dissolve into three sub-groups, from which the individual East Germanic, North Germanic and West Germanic languages later developed.

3.1.1 East Germanic languages

The East Germanic languages were a sub-group of already extinct Germanic languages used by Germanic people, who were settled to the east from the Oder river in today’s Poland. As the settlement continued from southern Scandinavia and the coast of the Baltic sea (probably up to 1st century BC), the initial eastern boundary of East Germanic people is supposed to be the Vistula river – thereof the alternative name „Oder-Vistula Germanic languages“; in the first centuries AD spreading as far as the Crimean peninsula, where the archeologic findings had proven the presence of Germanic people, particularly Goths.

As East Germanic languages are classified Gothic, Burgundian and Vandalic, however the written evidence (including its unique alphabet) exists only for the Gothic language,

particularly Crimean Gothic. The Gothic Bible – translation of the Bible into the Gothic language in the 4th century by a monk named Wulfila (alt. Ulfilas), was probably the first piece of literature ever written in any of the Germanic languages. All the East Germanic languages are believed to become extinct by as late as the 10th century, however the Crimean Gothic (whose relation to its predecessor Gothic is not yet clear) was still spoken in some isolated areas of the Crimean peninsula until its extinction by the late 18th century.

According to Robinson, Orrin (1992), the East Germanic languages were presumably the first of the three sub-groups of Germanic languages to develop differently from the other ones. Evidence for its verification may be found in the written texts of Gothic, for example complete absence of umlaut vowels or not present rhotacism [z] > [r] as a product of Verner's law.

3.1.2 North Germanic Languages

The North Germanic languages are a sub-group of Germanic languages, which developed from the northern dialects of Proto-Germanic language probably in the first centuries AD. The exact date when the division took place is difficult to estimate, but is believed to happen somewhere around the year 200 AD, according to Hawkins, J. (1987). The only obtained evidence is from the runic inscriptions found in Northern Europe, in which at that time happened several changes unique to this area. Those include for example semivowel sharpening (known as Holzmann's law), loss of initial [j] and before a rounded vowel [w] as well, loss of medial [h] resulting in lengthening of the preceding vowel or loss of word-final [n] after dropping the final short vowel. Some scholars, such as Düwel & Nowak (1998) however argue about the clarity of the division. What is certain though, is the fact of the resulting language, known as Proto-Norse, becoming the common ancestor of all North Germanic languages.

The Proto-Norse period is usually dated to last since the 3rd century AD until 8th century AD when the language developed into Old Norse. Two major changes occurred in the language and thus umlauts (a-, i- and u- umlaut respectively) and vowel breaking. The Old Norse language was spoken sometime between 7th to 8th century until 14th to 15th century and this era would include the Viking explorations and voyages, thanks to which the language spread from southern Scandinavia to the British Isles, as well as the territories discovered at that time, which include North Atlantic archipelagos (Orkney, Shetland and Faroe Island), Iceland,

Greenland and Vinland, the newly discovered lands in Northern America, spanning from northern islands of today's Canada as far as to Newfoundland. Old Norse has gradually divided into two categories known as Old West Norse and Old East Norse, which meant the final major group splitting prior to the development of the individual Northern Germanic languages as we know them today. It can be assumed, that Old West Norse is the common ancestor of the insular North Germanic languages and Nynorsk variety of Norwegian and Old East Norse of the continental North Germanic languages. The classification of the Old Gutnish and its recent descendant Gutnish is however a subject to further research – some sources subordinate it within the Old East Norse as one of its later developments, some other claim it to be the third, independent dialect of Old Norse with its unique and distant features to both other ones. Gutnish is as of 2010 considered a „definitely endangered language" by UNESCO and is spoken by only a few thousand speakers found mostly on the Fårö and northern part of Gotland island. In the late Middle Ages, all the Old Norse dialects started to further develop and after the 15th century, the individual languages are already distinguishable from each other. In general, given the geographical distribution, the insular languages remained due to their isolation more conservative in changes and resemble its common ancestor more than the continental languages spoken in Scandinavia today, as those further developed similarly thanks to their location on the European mainland as well as due to the politics (at one point belonging to the same empire – Kalmar union) and to the contact with neighbouring languages, e.g. Middle Low German distributed within the Hanseatic league.

Eastern dialects of Old East Norse gradually developed into Old Swedish and later Modern Swedish, with the Gustav Vasa Bible translation in 1541 being considered the breaking point. The distinctive features of Modern Swedish include letter with diacritics "ä", "å" and "ö", softening of [g] and [k] into [j] and [ɕ] respectively when preceding a front vowel, the development of the „sj-sound" [ɧ] - a voiceless post-alveolar-velar fricative found exclusively in Swedish which is a subject to further discussions among the phoneticians[1] about its precise quality - and the retroflex approximant [ɻ] as the most common realization of the phoneme /r/, which in combination with a following alveolar sound within a consonant cluster produces retroflex consonants [ʈ], [ɖ], [ɳ], [ɭ] and [ʂ]. Swedish is regulated by the Swedish Language Council and the Swedish Academy in Sweden and by Research Institute for the Languages of Finland in Finland. Swedish is spoken as a majority language in most parts of Sweden (with the exception of northern areas in Tornio valley where Finnish/Meänkieli and Sami prevail), and in Finland, where it is recognized as an official language everywhere in the country,

however significant Swedish-speaking minority lives mostly on the southern and western coast of the country, and on the Åland Islands archipelago, where it is the sole language used. Total number of Swedish native speakers is estimated by Ethnologue at 10 million people. Historically, Swedish was spoken in "Aiboland", the islands and coastal regions of today's north-western Estonia, by the local Swedish minority, which was evacuated to Sweden in the end of the World War II and the number of native speakers of Estonian Swedish is recently unknown.

The other dialects of Old East Norse spoken in the south gradually developed into Danish language. Danish was used throughout the time as an administrative language of the multi-national North European state units (Kalmar Union, Demark-Norway, etc.) including its territories outside the continental Europe. In the Middle Danish period, the language started to differentiate from the other Scandinavian languages, especially from Swedish, partially also thanks to contact with Low German, a source of some loanwords to the language. Uniquely Danish features include stød – a suprasegmental unit separating a single syllable in two phases by laryngealisation -, and letters "æ", "ø" and "å". The Danish orthography settled after the translation of the Bible into Danish by Christiern Pederesen in 1550 and the Standard Danish, based on the Copenhagen dialects, became dominant with the Golden Age of Danish culture in the first half of the 19th century. The most recent change was dropping the capitalization of nouns after the World War II. Danish is today regulated by the Danish Language Committee and it is spoken as a dominant language in Denmark with a few dialects throughout the country, and it is also a second official language in other parts of the Kingdom of Denmark - on the Faroe Islands and in Greenland (prior to its independence in 1944 on Iceland as well), and it is a recognized minority language in the state Schleswig-Holstein in Germany. The total number of native speakers is estimated by Ethnologue at 6 million.

As opposed to other continental North Germanic languages, Norwegian developed from Old West Norse. Old Norwegian diverged more from the insular languages somewhere in the first centuries of the 2nd millennia and the differentiation accelerated even more after the Black Death in the mid-14th century, when majority of Norwegian speakers died out because of the illness. In the 16th century, Norway became part of Denmark-Norway kingdom, in which Danish was the language of administrative and Norwegian ceased to be used in its written form, which was revived in the late 19th century. Therefore experiences recent Norwegian a schism of its written form with two existing varieties of equal status - Bokmål (lit. "book language"), the Danish standard applied on Norwegian, and Nynorsk (lit. "new Norwegian"),

based on dialects of western Norway collected by a Norwegian philologist Ivar Aasen in the late 19th century, however in common usage Bokmål dominates over Nynorsk in approx. 85% to 15% ratio, according to the Language Council of Norway citing Lars Vikør (2005), the language regulator for both of the forms. Ethnologue estimates, that more than 5 million people speak Norwegian as native language, found mostly in the Kingdom of Norway.

Faroese is alongside Danish one of the two official languages on the Faroe Islands. Faroese developed from Old West Norse, brought by Norse settlers in the 9th century on the archipelago. Its distinctive would include severe diphthongisation and palatalisation, stops being contrasted by aspiration rather than by voicing. The Faroese orthography was introduced by Jón Sigurðsson in 1854 and is based on the Old Norse roots, similarly to the orthography of Icelandic. Faroese uses special characters "æ", "ø" and "ð", which however lost its phonemic counterpart [ð] and is usually pronounced as [j], [w], [v] or completely left out, and acute accent marking diphthong realizations. Faroese is regulated by the Faroese Language Board and is recently spoken according to Ethnologue by around 70 thousand native speakers, found mostly on the Faroe Islands and in Denmark. Faroese has also a minority status in other parts of the Kingdom of Denamrk, - in Denmark and Greenland.

Icelandic started to develop as a separate language from the Old Norse brought by settlers on Iceland upon the island's discovery in the late 9th century. The language underwent rather conservative amount of changes (the geographical isolation certainly contributed to it as well) and is generally treated to be the closest one to resemble Old Norse. The Bible was for the first time translated into Icelandic in the mid-16th century and the orthography was consolidated in the 19th century by Danish linguist Rasmus Rask and it is mostly identical to the one used for Faroese (however using "ö" instead of "ø" and with additional letter thorn "þ" for the voiceless dental fricative [θ]). In Icelandic, "h-" is retained in consonant clusters "hl", "hr", "hn" and "hv", the geminate "ll" changes its pronunciation to [tl] and the distinction between voiced and voiceless realizations of /r/ and /l/ is realized as well. Icelandic is regulated by the Árni Magnússon Institute for Icelandic Studies and it is the national language of Iceland with according to Ethnologue over 300 thousand speakers found mostly on the main island of the Republic of Iceland.

The other two North Germanic languages - Greenlandic Norse and Norn – are already extinct. Greenlandic Norse (not to be confused with recent Greenlandic - "Kalaallisut", an Eskimo-Aleut language) developed from Old Norse and was spoken by the Greenlanders in the Norse settlements in Greenland. The written evidence of the language is very sparse, mostly in runic

inscriptions. On behalf of those, the shift of the dental fricatives [θ] and [ð] into dental stops [t] and [d] was proven. Other evolution of the language is unclear due to insufficient evidence, as well as the language development in the newly discovered lands in today's northern Canada, in the Saga of the Greenlanders named as Helluland, Markland and Vinland. The extinction of the Greenlandic Norse is believed to happen by the mid-15th century with the Norse settlements becoming deserted, probably because of a climate change in Greenland (corresponding with the beginning of the Little Ice Age in the Middle Ages) or as a consequence of conflicts with the Inuit people.

The Norn language was based on the Old West Norse and was spoken on the Orkney and Shetland archipelagos following a Norse settlement in the 9th century. Norn began to decline in usage following the pledge of the Orkney and Shetland to the Scottish king James III. in 1468 and 1469 respectively with Scots to become the dominant language instead. According to Jones (1997), Norn was spoken in the northern Scotland (Caithness) as well, where it became extinct in the 15th century. Norn was officially proclaimed extinct following the death of the last native speaker Walter Sutherland from Skaw, the northernmost settlement of the United Kingdom, in the year 1850.

In present, there are five surviving North Germanic languages, which all evolved from Proto-Germanic through Proto-Norse, Old Norse and West or East Old Norse into five recent languages – two insular (Icelandic and Faroese) and three continental (Norwegian, Danish and Swedish). The continental languages retain a significant mutual intelligibility, as they form a dialectal continuum with each other, whereas the insular languages are more conservative in their development from Old Norse and orthography. Swedish and Danish are also official language of the European Union, and all the languages (except for Faroese, but alongside Finnish) are official languages of the Nordic Council. The total number of North Germanic languages' native speakers is estimated to be more than 22 million, mostly found in the Northern European countries.

3.1.3 West Germanic languages

The West Germanic languages have developed from the southern dialects of Proto-Germanic language in the early centuries AD. The area, where the predecessor of modern West Germanic languages commonly referred to as Proto-West-Germanic, was spoken extended then from the mouth of Rhine on the West, to the Oder river on the East, from today's

southern Denmark on the North to the Danube river on the South, making the Germanic tribes living along the Rhine and Danube rivers immediate neighbours of the Roman empire, where dialects of vulgar Latin were spoken. West Germanic languages are believed to be no further mutually intelligible with the other two sub-groups sometime around 2nd to 4th century, certainly however prior to the Migration period, in which the linguistic areas in Europe severely changed. By that time, three dialects of Proto-West-German further evolved, effectively creating three groups of West Germanic languages. These include: Ingvaeonic group (alternatively called North Sea Germanic) spoken along the North Sea coast, Istvaeonic group (otherwise known as Weser-Rhine Germanic, since it was spoken in the area between the two rivers) and Irminonic group (denounced as Elbe Germanic as well) spoken to the east from the previous groups as far as Danube to the south and Oder to the east.

Phonetically, West Germanic languages share the results of Grimm's law and Verner's law with the North and East Germanic groups, however add some more new features. Those include according to Robinson, Orrin W. (1992) delabialization of labiovelar consonant and merging them with velars (except word-initially), voiced dental fricative [ð] becoming a dental stop [d] (although later reversed in English), West Germanic gemination - a consonant being doubled when followed by a glide /j/ with the exception of [r], loss of word-final -z, eventually simplifying the declination paradigms of nouns; and preservation of grammatischer Wechsel shifting the vowel sounds within the weak verbs‘ paradigms.

The language areas of the three groups of West Germanic languages however altered following the Migration period to the extent which is preserved in Europe to the recent times. The Ingvaeonic group, ancestral to modern English, Frisian and Low Saxon, remained spoken along the North Sea coast, however with the migration of Angles and Saxons across the sea extended to the Great Britain, where their languages mixed together with Old Norse brought by settlers from Scandinavia and founded the basis of Old English language. Istvaeonic group, ancestral to Dutch and Franconian dialects, expanded to the south beyond the Rhine river and finally the Irminonic group, ancestral to most of the German dialects, which expanded to the south (today's Austria, Switzerland and parts of northern Italy) and to the east (today‘s Czechia and Poland). Particularly striking was the migration of Langobardic people, speaking an Irminonic language, from the area in today's eastern Germany to what is contemporarily a region of northern Italy named after them as Lombardy, however the precise evidence of the connection of Lombardic and its neighbouring languages is uncertain, given the sparse number of inscriptions and its early extinction in the Early Middle Ages. From what is known,

an evidence of realised High German consonant shift is achieved and the influence of Bavarian and Alemannic dialects is suggested, given the reported contact between the people groups.

The West Germanic languages began to distinguish rapidly from each other by the late centuries AD, gradually becoming the earliest stages of modern West Germanic languages. Among Ingvaeonic languages belong English, Scots, Frisian and Low German/Low Saxon, Istvaeonic languages include Dutch and its daughter language Afrikaans and Irminonic languages are comprised in recent German, with Luxembourgish and Yiddish, which evolved from High German. As the main objective of this thesis is to focus on the development of the major languages, the brief information regarding the remaining West Germanic languages is summarised as follows:

Scots (sometimes referred to as Lowlands Scots to distinguish it from the Scottish Gaelic, the Celtic language of Scotland) is a sister language of English, which developed from the Early Middle English in the late Middle Ages in Scotland. Some scholars dispute the status of Scots as a separate language and subject it to English as a set of dialects instead. Therefore, the exact number of speakers is disputed as well – whereas Ethnologue almost 100 thousand speakers, in the 2011 census in Scotland more than a million and a half of people self-declared themselves to be able to speak Scots. Geographically though, the language is mostly restricted to Scotland and northern Ireland (the Ulster Scots dialect).

Frisian is a collective name for the three Frisian languages spoken along the North Sea coast of today's Germany and the Netherlands. Frisian is historically considered to be the closest language relative to English, given the common development from the Ingvaeonic language group of the West Germanic languages by the phenomena known as the Ingvaeonic nasal spirant law and Anglo-Frisian brightening, prior to ultimately splitting into two separate languages. The Frisian-speaking area has been severely reduced throughout the time and the previously single language separated into three no more intelligible sets of dialects, usually labelled as languages – North Frisian, East Frisian and West Frisian.
North Frisian is a protected minority language in the northernmost German district Nordfriesland and on the Heligoland islands, having ten dialects in total – three insular and seven on the mainland. The figure of speakers is not exactly known, the estimates suggest eight to ten thousands, mostly bilingual with German. North Frisian is considered by UNESCO as a severely endangered language.

East Frisian comprised of Ems and Weser dialects of Frisian, which are however mostly extinct with the exception of Saterland Frisian. This expression is sometimes used for the whole group, as it is the only surviving dialect of the language. The generally accepted number of speakers oscillates around two thousand people, located in the Saterland municipality in the Lower Saxony state in northern Germany.
West Frisian is the most widely spoken of the Frisian languages with about 400 to 600 thousand speakers, depending on sources and language capabilities. It is one of the two official languages as well as languages used in administration and education of the Friesland province of the Kingdom of the Netherlands, where most of the native speakers live, However, it is considered by UNESCO as a "vulnerable language" with a danger of becoming extinct. Frisian is regulated by the Fryske Akademy, founded in 1938 and based in Leeuwarden in the province Friesland of the Kingdom of the Netherlands.

Low German is a language spoken primarily in northern Germany and north-eastern Netherlands, to the north from the Uerdingen and Benrath isoglosses, territorially equivalent to the area where the Low German dialects of German have been historically spoken. It developed from the Old Saxon language (therefore the alternative name Low Saxon, used more in the Netherlands, as opposed to Low German in Germany), which belongs to the Ingvaeonic group of West Germanic languages, similarly to Frisian and English, and the language was not affected by the High German Consonant Shift at all.
According to the results of the 2016 research by the Institutes for the German and Low German languages, around 5 million people self-reported themselves to understand "well or very well", 2, 2 million of which "very well" only and the number of native speakers in the Netherlands is estimated to be ca 1, 7 million according to Extra & Görter (2001), p.10. Low German is also a recognized minority language in Mexico, Bolivia and Paraguay, where minor immigrant communities of Low German speakers live, however the figures of speakers are only marginal. Low German is considered a "vulnerable language" by UNESCO.

Luxembourgish is one of the three official languages in the Grand Duchy of Luxembourg since 1984. Although the language is mutually intelligible with its surrounding Mosel Franconian dialects of German (the zone 4 of the Rhenish fan – see further), it uses different orthography from Standard German and many French loanwords are present in the language. The regulation body of Luxembourgish is the Council for the Luxembourgish language, founded in 1998 and according to the site Sorosoro, Luxembourgish is spoken by approximately 600 thousand native speakers.

Limburgish is a language spoken in the Dutch and Belgian provinces of Limburg and surrounding areas in Germany. It has received the official status of a regional language only in the Kingdom of the Netherlands, however the proclamation has been disputed by the Dutch Language Union for being rather politically motivated and based on sociolinguistic reasons. In Belgium and Germany, the language is treated only as a dialect of its superior language in the country – Dutch and German respectively. In the Netherlands, the regulation body of the language is the Limburgish Language Council. According to Ethnologue, some 1,3 million people speak Limburgish in the Netherlands and Belgium. The number of speakers in Germany is unknown.

Yiddish is a West Germanic language derived from Middle High German in the Middle Ages, which was spoken by the Ashkenazi Jews historically, mostly in Central Europe. The name itself can be translated as "Jewish" (from German "Jüdisch", mean the same). It is the only West Germanic language, which does not use the Latin alphabet, but the Hebrew one instead. Contemporarily, Yiddish has two major forms – Western, based on the language of the Jews living in the Teutonic language area, and Eastern, which contains a plethora of Slavic loanwords and is by far the prevalent form spoken today. Various estimates claim there were 11 to 13 million Yiddish speakers prior to the Holocaust, which caused severe decline in the language usage, given that many of its speakers were murdered. Estimates from the years 1986 to 1991 cited by Ethnologue state the number of 1,5 to 2 million speakers at that time. A more recent estimate from Rutgers University in 2012 advises a figure of 600 thousand people speaking Yiddish: *"It is estimated that there are about a quarter million Yiddish speakers in the United States, about the same number in Israel, and another 100,000 or so in the rest of the world."* The phonology of Yiddish is mostly similar to German with only little differences, such as the uvular realization solely of the velar fricative [χ], no distinction of vowel length and no presence of rounded front vowels [ø] and [y].

For the purpose of this thesis, the focus is given on the development of the three major West Germanic languages, one from each of the sub-groups: English for the Ingvaeonic, Dutch for the Istvaeonic and German for the Irminonic, due to their linguistic and cultural significance, greater amount of speakers, pluricentricity, widespread in the world and relevant differences, which of description is the main objective of the thesis.

3.2 Development of German

The German language in its contemporary form is based on the innovations, which developed in High German, the dominant language from the Irminonic group of West Germanic languages, combined with some vocabulary adopted from Low German and all groups of German dialects spoken throughout the Sprachraum. German is a crucial language for technology and industry, as well as an essential means of communication in West-Central Europe with almost 100 million native speakers.

The development of German is traditionally divided into four phases – Old, Middle Early New and New High German. The Old High German period lasted since the split of the continental West Germanic languages and was characterized mostly by the widespread of the High German Consonant Shift changes, which is discussed later.

The Middle High German period (dated 1050 – 1350 AD in Waterman, J. (1976), p.83.) saw the expansion of German eastwards in the process known as "Ostsiedlung" (lit. "eastern settlement"), beyond the previous limit on the Elbe and Saale rivers. In the MHG period, first pieces of literature in German were written, such as The Song of the Nibelungs (ca 1200 AD), and German began to replace the role of Latin in official documents. First attempts to standardize German language occurred, such as the "mittelhochdeutsche Dichtersprache" (lit. "Middle Ages' poet language) in the Hohenstaufen court in Swabia. Phonetically, MHG introduced diphthongization of some vowels and weakening of unstressed short vowels to schwa [ə]. The Middle High German period's terminal date is placed to the middle of the 14th century, according to Scherer & Jankowsky (1995) 1350 AD to be generally accepted, in the middle of the Black Death pandemic.

The Early New High German period, by Scherer & Jankowsky (1995) delimitated between the Black Death in the middle of the 14th century and the Thirty Years' Was in the middle of the 17th century (with the numeric expression 1650 AD), introduced the initial phases of standardization of the written language, thanks to the invention of the printing press in the 15th century. Various printers developed their own printing standards of the German orthography, commonly labelled as Druckersprachen (lit. "printers' languages"), however as a dominant standard, the one presented in the Martin Luther's translation of the New Testament in the early 16th century was enforced thanks to its widespread, connected to the Protestant church.

The terminal phase, New High German, is generally seen as the contemporary period of German with low-to-none development in the phonetics. According to Roelcke (1998), the period is often sub-divided into three more phases: the first one (Älteres Neuhochdeutsch, lit.

"older New High German") until the beginning of the 19th century with the gradual standardization of the language, the second phase (Jüngeres Neuhochdeutsch. lit. "younger New High German") until the end of the Second World War, with the succeeding standard language spreading through media and education and with German being the international language of science, and the third phase (Gegenwartsdeutsch, lit. "contemporary German") after 1945 with the loss of German-speaking territory in the eastern Central Europe, declining importance of German as an international language and with a massive influence of English on the German vocabulary.

The geographical distribution of German is recently mostly restricted to the areas in Central Europe, the so-called German Sprachraum, where German is spoken as a dominant language. Around 90 – 95 million speakers are estimated to exist according to Marten & Sauer (2005), p.7., however the exact number is difficult to determine, given the extent of the language in the manner which dialects / varieties shall be included and which should not. Therefore a simplified number can be rounded to approx. 100 million native speakers. Most of the German native speakers are found in the DACH countries (lit. "roof"; D = Deutschland (Germany), A = Austria and CH = Confoederatio Helvetica (Switzerland)), as well as in Liechtenstein, Italy (South Tyrol province), Belgium and Luxembourg.

Outside of the Sprachraum, German played a major role throughout Europe historically. As a lingua franca of the Hanseatic League, German speakers were found in the cities in today's Baltic countries with Memel (today Klaipėda, Lithuania) being the easternmost outpost of the German empire in the late 19th century. Surviving language minorities exist alongside the majority languages in southern Denmark (Northern Schleswig) and France (Alsace and Lorraine) as a consequence of the Treaty of Versailles and German defeat in the World War I. Several regions of today's Poland were historically parts of the German states and therewith unilingual German all the way until the end of the Second World War, after which the expulsion of German-speaking population took place. The estimates claim four to eight million people to be affected by the expulsion (with five to six million being the most reliable figure), mostly from the region of Silesia, East Brandenburg, Pomerania, East Prussia and the city of Gdańsk, as well as some more from the pre-war territory of the Second Polish republic.

Similar situation occurred in Czechoslovakia with the three-million German population distributed mostly in the bordering regions commonly referred to as Sudetenland and speaking various dialects of German shared with the regions beyond the border. The Prague

German played a role in the orthography development of German in the Middle Ages and in the 19th century was considered to be the finest dialect in the Austro-Hungarian empire. Almost entire German population of today's Czech Republic was however resettled after the Second World War (initially wildly, later in 1946 in an organised way) which effectively meant the moribundity of the language in the post-war Czechoslovakia.

Other German-speaking minorities were found in many other Central and Eastern European countries, such as Slovakia (Carpathian Germans), Hungary (Danube Swabians), Romania (Transylvanian Saxons) and other countries in the Balkans and Eastern Europe (Volga Germans) as far as today's Kazakhstan, however the overall numbers are recently marginal.

Outside of Europe, German speaking communities are found in Namibia and South Africa, as a consequence of previous colonial history, however the language is retained by only thousands of people there and even smaller communities exist in other African countries previously being colonies of the German empire – Tanzania and Cameroon.
In another German ex-colony, Papua New-Guinea, the only creole language based on German, English and Tok Pisin developed, known as "Unserdeutsch" (lit. "our German"). After the independence of Papua New-Guinea in 1975, most of the speakers moved to Australia and according to recent researches, only about 100 people remained speaking the language according to SBS in 2016.

3.2.1 High German Consonant Shift

The High German Consonant Shift was a process of phonological development of (bi)labial, dental/alveolar and velar consonants which affected the West Germanic languages' dialect continuum in the course of a few centuries AD. It is believed to happen not earlier than in the 5th century and being completed by the 9th century. The implementation of these innovations is commonly accepted to happen from the southernmost dialects (Alemannic and Bavarian) northwards, given that not all German dialects were affected by the alternations equally. The extent of the alternations is a major criteria for distinguishing modern German dialects into three groups (see further).

The individual changes within the High German Consonant Shift are divided into four consecutive phases (or three; some scholars oppose the idea of the changes in the Phase 4 to be subjugated into the HGCS and label them as other individual changes instead), which

happened as a chain shift, similarly to the First Germanic Sound Shift described further as Grimm's and Verner's law.

The Phase 1 is believed to happen in the 7th century, prior to promulgation of the Edictum Rothari in 643 AD. This phase included shifting single voiceless plosives into either geminate fricatives word-internally or single fricatives in word-final positions, in this way:

bilabial:	[p]	> [f] (or [ɸ] as allophone, later merged)
alveolar:	[t]	> [s]
velar:	[k]	> [x]

This changes in Phase 1 were successful in almost all High and Central German dialects with some exceptions in the West Central German dialects (see further „Rhenish fan")

The Phase 2, which is believed to happen subsequently after the Phase 1 and to be already implemented by the 8th century, affected the remaining voiceless plosives not affected by the initial phase. In the Phase 2, the voiceless plosives became affricates in word-initial position, when being geminated and if they were preceded by a liquid (/l/, /r/) or a nasal (/m/, /n/):

bilabial:	[p]	> [p͡f]
alveolar:	[t]	> [t͡s]
velar:	[k]	> [k͡x]

The Phase 2 however did not affect the plosives in consonant clusters of a fricative plus plosive and neither did /t/ followed by /r/ (for example in "-tr"/"-ter" suffixes). The extension of the affricates is however different for each of them individually. The alveolar affricate [t͡s] became successfully widespread throughout the whole area of High and Central German dialects, the bilabial [p͡f] was successful in most High German dialects, however appears in only some Central German dialects and the velar affricate [k͡x] is restricted only to the southernmost Alemannic and Bavarian dialects in Tirol (Austria, Italy). In Alemannic dialects of Switzerland, this affricate is preserved in geminates as opposed to other positions, where eventually evolved into a respective velar fricative [x]. Similar process underwent the alveolar fricative [p͡f] in East Central German dialects, where it became simplified into labiodental fricative [f]. This change also occurred in Yiddish, a daughter language of German-speaking Jewish population which had developed during the Middle High German period.

The Phase 3 is believed to happen after the previous two phases ceased to be productive

anymore, otherwise its products would be further modified in the course of the Phases 1 and 2. In the Phase 3 the originally voiced plosives became unvoiced:

bilabial:	[b]	> [p]
alveolar:	[d]	> [t]
velar:	[g]	> [k]

This change effectively filled in the gaps of missing sounds created by the phases 1 and 2. However, into Modern German only the alveolar change [d] > [t] in all positions and the other two only in geminates were kept in the language. The exceptions for the alveolar shift are given due to the language contact with Low German, where this process did not take place. Similarly, the labial and velar shifts remained successful in High Alemannic dialects in Switzerland and in Bavarian dialects in Austria. In some varieties of Old High German, the consonant cluster "-nt-" became shifted to "-nd-" as well, however as late as in Middle High German, the process was inverted back to its original from, with a possible exception where "-er" follows in words such as "unter" or "hinter" (lit. "under" and "behind").

Other consonant changes took place in the development of German subsequently after the process of initial three phases of the High German Consonant Shift took place and cease to be productive anymore. Some of the changes are referred to as Phase 4 of the HGCS, however this labelling is at least controversial and debatable. The argument in favour of this description is, that one more set of triplet sounds changed its quality (in this case voiced fricatives shifting into voiced plosives) and filled the gaps created by the Phase 3, however the reasons against the grouping into single Phase 4 include the chronological inaccuracies when did the individual changes happen as well as specific conditions under which each of the sounds shifted and the fact, that some more unrelated sound changes would fit chronologically, but would not with its quality (e.g. sibilants). Therefore the label Phase 4 may function as a summarizing simplification term of other sound changes despite its insufficient accuracy.

The first change, which would fit into the category of Phase 4, is shifting the dental fricative [ð] into alveolar plosive [d]. This change is believed to happen very early, possibly by the 2nd century AD already, given its massive widespread throughout the whole dialect continuum of West Germanic languages including even Old English (in which the process was later reversed however). The proposed chronology of the change does not correspond with other voiced fricative counterparts, therefore the label of Phase 4 becomes invalid. On the other

hand, the result of this dental shift is still evident in contemporary Dutch and German as in neither of the languages the voiced dental fricative occurs.

Another dental shift happened with the voiceless dental fricative [θ] becoming voiced alveolar plosive [d]. The chronology for this change is proposed to take place after the Phase 3 as there is evidence of unshifted forms in the earliest Old High German texts in the 9th century. The shift was spreading from the south to the north, appearing initially in High German, later in Dutch and finally in Low German centuries later. Whereas the chronology of the change would fit the requirement for the label of Phase 4, its quality is only eligible thanks to the fact of [θ] and [ð] being realised as allophones of each other at that time.
In word stems, where the original /þ/ was followed by labiodental fricative /v/, this consonant cluster followed the same development and furthermore later merged with its voiceless counterpart. Finally the initial plosive became an alveolar affricate, as follows:

[θv] "þw-" > [dv] "dw-" > [tv] "tw" > [t͡sv] "zw"

This final change, identical with the Phase 2, suggests the idea, that the phases of the High German Consonant Shift might have happened repeatedly under different circumstances.

The bilabial voiced fricative [β], which appeared word-internally as an allophone of /b/, shifted in two different ways. In Old High German, [β] shifted intervocalically and after /l/ into a voiced bilabial plosive [b], however in the other languages of the continental dialect continuum and some West Central dialects towards the labiodental fricative – voiced [v] intervocalically and voiceless [f] word-finally. There exist several exceptions in this rule, probably as a result of West Germanic gemination and the grammatischer Wechsel, however the exact rule for the changes remains unclear.

The voiced velar fricative [ɣ] similarly underwent multiple ways of development. In Upper German dialects, the original voiced velar fricative became voiced velar plosive [g]. This shift had to be productive not later than until 8th century, when the Phase 3 of the High German Consonant Shift shifted its product [g] into its voiceless counterpart [k]. In Upper German dialect this sequence [ɣ] > [g] > [k] succeeded in all positions.
In Ripuarian dialect, the voiced velar fricative [ɣ] became a palatal approximant [j] word-initially, possibly as a result of the Anglo-Frisian palatalization (see further), being its westernmost extension. In other Central German dialects, the voiced velar fricative underwent the palatalization process partially as well in some of them and a similar process in other,

creating realisations [ʝ], [j], [ʒ] and [ʁ] between vowels and [ɛ],[ʃ] and [x] word-finally. The voiceless realization [ɛ] is moreover a common realization of word-final "-g" in Standard German as well when following a front vowel.

Besides the shifts of voiced fricative to voiced plosives, one more shift occurred in Old High German, namely a shift of sibilants. The consonant cluster [sk] shifted in all positions into a voiceless post-alveolar fricative [ʃ] as well as [s] in other word-initial consonant clusters. Orthographically, the [ʃ] sound is in the modern German spelling written as a trigraph "sch" in all position, except in consonant clusters preceding "p" and "t" (see further).
Similarly, a consonant cluster, where /s/ is preceded by an /r/ got shifted similarly into [rʃ]. Furthermore, in Upper German dialects, a subsequent consonant cluster "-rst-" was impacted as well, however in modern Standard German, this change in not reflected and the common realisation of the cluster remained [ʁst].

For the word-final voiced plosives, products of above mentioned changes (of the Phase 4 according to some scholars), one more alternation happened, and thus terminal devoicing. Terminal devoicing was a process, in which the word-final voiced plosives [b], [d] and [g] in German ([ɣ] in Dutch) are devoiced and realised as their respective voiceless counterparts [p], [t] and [k] in German ([x] in Dutch), however they retain the original spelling. Although in Middle High German period the spelling for these realisations altered, in modern Standard German the change in spelling got reversed, partially due to the inflectional forms of the words, in which the original voiced realisations of the word-final consonants in the nominative case are kept due to the added suffixes, which affect the pronunciation of the words according to standard rules of German orthography.
The phenomenon of terminal devoicing is common for both German and Dutch and according to Mees, B. (2002) is believed to have its origin in Frankish (direct ancestor of Old Dutch) first, as the earliest records of such a change come from Old Dutch texts from the time, when no such change was yet recorded for neither Old High German nor Old Low German (Old Saxon).

Although the precise data cannot be given with a higher degree of certainty for the chronology of the High German Consonant Shift and all of its phases given the sparse evidence of written records, at least some basic rules can be set. Firstly, the disappearing sounds in Phases 1 to 3 (and 4 would fit as well) creating holes in the High German phonology, which were filled by the consecutive phase. This way, the whole set of changes could have taken place in the form

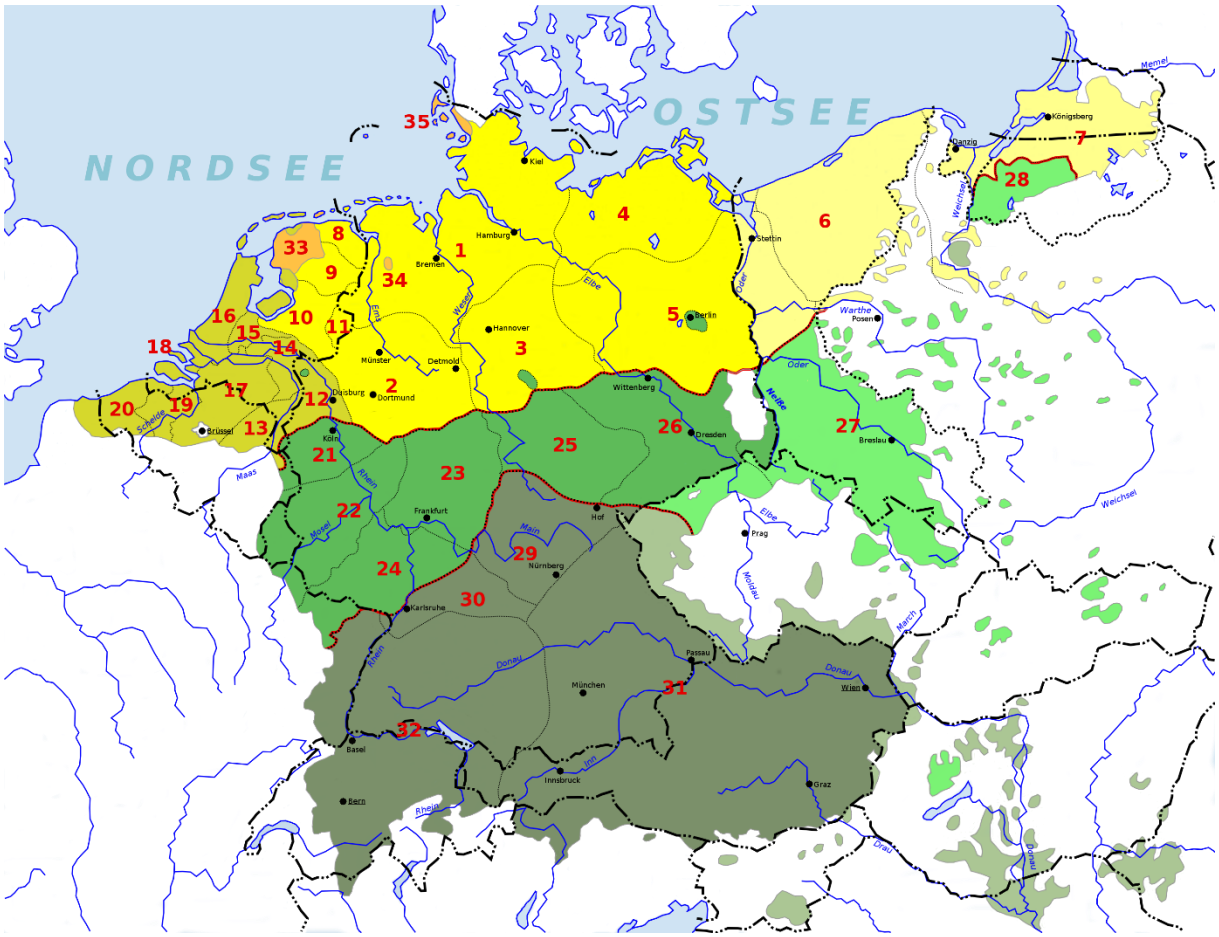
of a chain shift. The resulting phases then demonstrate the extensive presence of voiceless fricatives in German as opposed to other West Germanic languages (result of the Phase 1) as well as the absence of the voiced fricatives (result of changes, which could be labelled as Phase 4).

Secondly, the sequence of the phases 1 to 3 might be based off the geographic distribution of the changes, as Phase 1 reached all Upper German and Central German dialects, Phase 2 did affect Upper German dialects entirely, however Central German dialects only partially ([t] > [t͡s]) and the Phase 3 only in Upper German dialects, with some of its features in the southernmost Bavarian and Alemannic dialects only. The Phase 4 on the other hand would have to be excluded from this rule, given that the underlying changes did affect the whole continental West Germanic dialect continuum.

Overall, the generally accepted constituent sub-processes include the phases 1 to 3 to occur consecutively following each other, whereas the changes within the Phase 4 shall be interpreted rather as other changes to the High German language development, although sharing some similar features with the other Phases of the High German Consonant Shift.

3.2.2 Dialects of German

The German language does have, as well as almost every other language, its various dialects, which all evolved during the extensive development of the language spoken in pivotal part of Central Europe for many centuries already. The classification of the dialects is highly dependent of the effects of the High German Consonant Shift and its geographic distribution throughout the Teutonic language area, in German known as “Sprachraum“. Although the precise number of the dialects varies, for the purpose of this thesis, the division by König, W. (1992), pp. 230-231. will be utilised to depict the dialectal areas of German.



Picture 1 Von Hardcore-Mike - Eigenes Werk, CC BY 3.0, https://commons.wikimedia.org/w/index.php?curid=48971491

There exist three main dialectal areas of German – Low, Central and Upper German dialects, which are divided by two isoglosses (Benrath and Speyr lines, named after the place names through which they run: Benrath – a southern suburb of Düsseldorf, and Speyer).

The Low German dialects are spoken in the northern parts of Germany. They were almost unaffected by the High German Consonant Shift, and only the changes in the Phase 4 (voiced

fricatives becoming voiced plosives) were productive in the area. Low German dialects are however not be confused with the Low German language, a separate language, which is nevertheless still spoken in northern Germany as well and its influence on the Low German dialects is obvious. In the above picture, the Low German dialects are depicted in yellow colour. The dialects in this group therefore include: Nordniedersächsisch (North Low Saxon; as nr. 1), Westfälisch (Westphalian; as nr. 2), Ostfälisch (Eastphalian; as nr. 3), Meklenburgisch-Vorpommsch (Mecklenburg-West Pomeranian; as nr. 4), Märkisch-Brandenburgisch (Brandenburgish / -ian; as nr. 5), Ostpommersch (East Pomeranian; as nr.6) and Niederpreußisch (Low Prussian; as nr. 7) as well as Gronings (8), Drents (9), Gelders-Overijssel (10) and Twents (11), which are spoken in the Netherlands and are commonly referred to as Dutch Low Saxon dialects. East Pomeranian and Low Prussian dialects are considered moribund after the Second World War due to the resettlement of German speaking population from the areas today belonging to Poland and Russia (Kaliningrad oblast) and thereby replaced by the respective Slavic languages.

Into the category of Low German dialect would fit also the Low Franconian dialect (in the picture above shown in dark yellow; nr. 12 to 20), which are however the dialects of modern Dutch are therefore will be discussed later in the thesis. The only Low Franconian dialect spoken on the terrain of the Federal Republic of Germany is Niederrheinisch (Low Rhenish, as nr. 12), which shares many similar features with its neighbouring dialects (Limburgish) in the Netherlands and Belgium and could serve as an example of continuous continental West Germanic languages‘ dialect continuum in practice.

The Central German dialects, further subdivided into West Central German and East Central German dialects are spoken in between the two isoglosses (Benrath and Speyr lines) and effectively create a fluent transition between Upper and Lower German dialects. They are characterized by a varying degree of the High German Consonant Shift sound changes‘ extent. In the picture above, Central German dialects are depicted in green colour. The West Central German dialects include all the Middle Franconian dialects, in the picture above under nr. 21 to 24, which are further discussed in the chapter “Rhenish fan“. The East Central German dialects include: Thüringisch (Thuringian; as nr. 25), Obersächsisch (Upper Saxon; as nr. 26), Lausitzisch-Schlesisch (Lusatian-Silesian; as nr. 27) and Hochpreußisch (High Prussian; as nr. 28). Where the first two mentioned are still spoken, the latter two are recently considered moribund, again due to the resettlement of German speaking population from Lusatia, Silesia and Prussia, regions recently belonging to the Republic of Poland. According

to Hammarström, Harald; Forke, Robert; Haspelmath, Martin; Bank, Sebastian, eds. (2020)., Yiddish – the language of German speaking Jews which developed from Middle High German, belong to the category of East Central German dialects as well.

The Upper German dialects are the southernmost group of dialects, spoken in southern part of the German Sprachraum. In these dialects, the High German Consonant Shift happened in its major to full extent and changes are believed to originate in this area. The Upper German dialects are shown in the picture above in grey and they include: Ostfränkisch (East Franconian; as nr. 29), Südfränkisch (South Franconian; as nr. 30), Bairisch-Österreichisch (Austro-Bavarian; as nr. 31) and Schwäbisch-Alemannisch (Swabian-Alemannic; as nr. 32). The Austro-Bavarian and Swabian-Alemannic dialects are further divided into Northern, Central and Southern Bavarian and Low and High Alemannic and Swabian respectively. East Franconian and South Franconian are sometimes clustered together and referred to as Upper Franconian dialects in common. Furthermore, if the connections between Lombardic and Upper High German is believed to exist, then could be Lombardic technically included to the category of Upper German dialects as well, however due to the insufficiency of written evidence, such classification is not used.

3.2.2.1 Rhenish Fan

The Rhenish fan is a term used for the further division of the West Central German dialects spoken along the Rhine river in western Germany in which the effects of the Phase 1 differ in their extent. The word "fan" is used given the visual similarity of the linguistic areas shapes with the leaves of a ventilator (being roughly radial with a merging point in the north-east). The individual zones are divided from each other by several isoglosses named after place names on the Rhine river through which they run and where the individual differences in realizations can be distinguished. For this thesis, the division by Gerorg Wenker, (1877). will be used to determine the single linguistic zones and their isoglosses. The image depicting the areas visually in the end of this chapter.

Zone 0: for the introductive purpose, the zone zero shall be defined as the space to the north of the actual dialects included within the Rhenish fan. The isogloss restricting the area is named the Unity Plural line, from which to the north only single one suffix is used for all the plural verbs forms, in this case "-t" for all three persons as opposed to usual "-en" suffix for the first and third person plural, common for the majority of German speaking area and official conjugation in Standard German. The Unity Plural line therefore divides the area

where Low German/Low Saxon language is spoken to the north (Westphalian) from its Low Franconian neighbours to the west and other Central German dialects (Hessian) to the south.

Zone 1 is determined by the Unity Plural line to the north and by the Uerdingen Line to the south. In the dialects within this area, the first person singular pronoun was not affected by the High German Consonant Shift and therefore remains unshifted - “ik“ [ik]. The Zone 1 corresponds with the eastern dialects of Dutch, which will be discussed further in the thesis.

Zone 2 includes the Limburgish language area. It is located to the south of the Uerdingen line and to the north from the Benrath line, which divides Low German and Central German dialects. In Limburgish, the first person singular pronoun underwent the velar shift from “ik“ [ik] towards the fricative form “ich“ [ix]. The velar shift however did not occur in the verb “machen“ [‘maxn̩] (lit. “to make“), which preserved the plosive realization “maken“ [makn̩]

The Zones 1 and 2 of the Rhenish fan therefore include Dutch and Limburgish – which both belong to the Low Franconian group of Low German dialects. In these, the effect of the High German Consonant Shift are minimal to none, as demonstrated on the words used above.

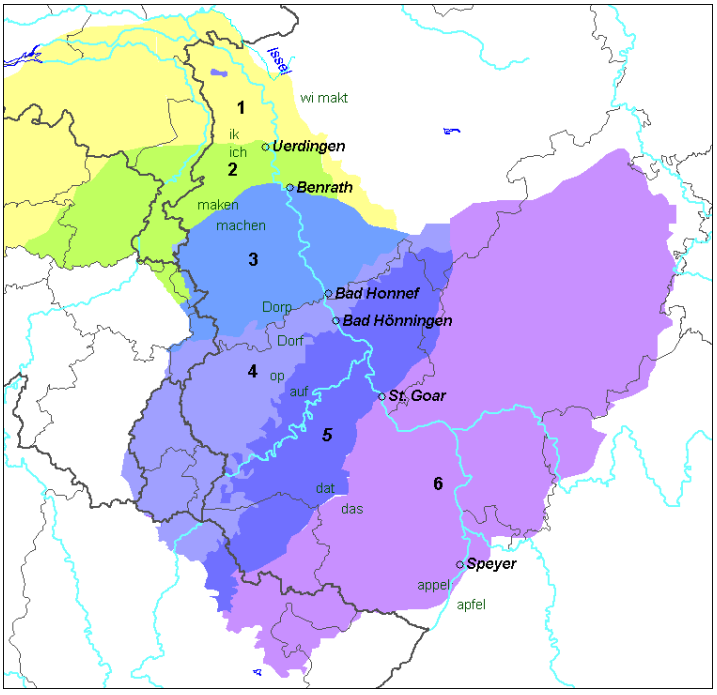
Zone 3 is referred to as Ripuarian Franconian dialect and stretches from the Benrath line to the north to the Bad Honnef line in the south. In Ripuarain, the verb “machen“ is realized with the voiceless velar fricative as [maxn̩], however the expression for a village – das Dorp – remains unshifted, preserving the word-final bilabial plosive: [doʁp].

Zone 4, which lies beneath the Bad Honnef line and extents to the Bad Hönningen line to the south, is referred to as West-Mosel Franconian. In this zone, the word for a village already adopted the word-final fricative, therefore the realization “das Dorf“ [doʁf], on the other hand in the form of the local preposition meaning “on (the surface)“ the same change does not appear and therefore remains “op“ [op].
The Luxembourgish language shares the same features as this dialectal area.

In the Zone 5, the East-Mosel Franconian dialect is spoken. The isoglosses are the Bad Hönningen line to the north and the Sankt Goar line to the south. In EMF, the abovementioned local preposition does have a word-final fricative: “of“ [of] (still missing an initial diphthong compared to “auf“ in Standard German). The relative pronoun for the neuter gender however retains an unshifted word-final plosive, in this case alveolar: “dat“ [dat], as opposed to “das“ [das] in Standard German.

Zone 6 is the southernmost zone of the Rhenish fan, being delimited by the Sankt Goar line to the north and by the Speyer line to the south. The dialect of the Zone 6 is named as Rhenish Franconian and is immediately neighbouring the Alemannic dialects, a group of Upper German dialects spoken beyond the Speyer line. In Rhenish Franconian, the neuter gender relative pronoun has been affected by the High German Consonant Shift: “das“ [das] and therewith all the changes in the Phase 1 of the HGCS are successful in the dialects, compared to the Phase 2 (plosives becoming affricates), which is not present in the area. That can be presented on the form of the word “der Apfel“ (lit. “the apple“), which is in the Zone 6 of the Rhenish fan realized with a plosive “der Appel“ [apl], as opposed to the East Franconian dialect beyond the Speyer line, where it is realized with the affricate as “der Apfel“ [ap͡fl], equally as in Standard German.

The zones 3 to 6 are thereby a more precise division of the West Central German dialects alongside the Rhine river, each having different extent of the plosives shifting into fricatives, as described in the Phase 1 of the High German Consonant Shift. Together with the two prior mentioned zones are a good example of how a dialect continuum between Dutch and German.



Picture 2 By Hans Erren - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=11321470

3.2.3 Standard German

The Standard German is the standardized language variety of German, which is used in formal occasions and as a way of intercommunication between the many German dialect, some of which are not intelligible with other ones. This standardized variety of German is often referred to as "Hochdeutsch" (lit. "High German") and it is being taught in schools.

The initial consolidation and standardization of the orthography and vocabulary is usually connected with Martin Luther, a German theologian, priest and monk, and a pivotal figure in the process of the Reformation of the Catholic church in the early 16th century. His translation of the Bible (the New Testament in 1522 and the Old Testament in 1534) has developed a norm for the written German language and it has been massively widespread thanks to the invention of printing press in the time shortly before. The translation is based mostly on the East Central German dialects spoken in the area where Luther used to live.

Contemporary Standard German has mostly preserved the Luther's work and therefore it is closest to the East Central dialects of German with additional loanwords from other dialects and from Low German language. Given that Low German has not been affected by the High German Consonant Shift, adopting the loanwords into German caused irregularities in the vocabulary. The loanwords have either completely replaced the original forms (such as Low German "Pacht" replacing original shifted form "Pfacht") or created doublets of words with the same origin and different semantics (such as shifted "Waffen" and unshifted "Wappen" used both in the contemporary language). This process created the situation of many words of German origin to appear unshifted in contemporary Standard German. Other words, which appear unshifted, are results of the inverted shifting of originally shifted words in Middle High German period or they are loanwords from other languages, such as Latin, French, English or neighbouring Slavic languages.
The influence of German dialects however pushes the usage of Standard German in everyday communication aside towards formal situation and as a means of interdialectal understanding. It is commonly assumed, that the cleanest dialect of German closest to its standard form, is spoken around the city of Hannover in central Germany.

In German, no official standard exists for the pronunciation of German, however the pronunciation published in the Duden dictionary is treated as such and will be further used in this thesis. For the purpose of theatre performances, a slightly different pronunciation rules apply, known as "Bühnendeutsch" (lit. "stage German").

The recent prescriptive norms for the German orthography were decided during the Second German Orthographic Conference in 1901 and came into effect the following year. The writing was based on the first German dictionary, published by a philologist Konrad Duden in 1880 and was accepted throughout the whole German speaking area. Two more reforms simplifying the orthography were agreed on by the governments of the German-speaking countries (Germany, Austria, Switzerland and Liechtenstein) and became effective in 1996 and 2006.

German is moreover a pluricentric language which three national standard varieties - German Standard German, Austrian Standard German and Swiss Standard German. These varieties vary from each other in their vocabulary and some minor changes in pronunciation, grammar and orthography apply as well.

The German Standard German is the standard language variety applied for German-speaking population in the Federal Republic of Germany, where it is the official language, and has been adopted by the German-speaking Community of Belgium and the Grand Duchy of Luxembourg, where it serves as a co-official language – in Belgium together with Dutch and French and in Luxembourg with and French and Luxembourgish. The German Standard German is commonly respected as the dominant language standard internationally and is the one usually taught as a foreign language to the foreign speakers. The expressions used solely in the German Standard German are called teutonisms.

The Austrian Standard German is the standard language variety in the Republic of Austria as the official language and it is one of the two official languages alongside Italian in the Province of Bolzano in northern Italy, commonly referred to as South Tyrol, where a dominant German-speaking minority lives (62,3% according to the 2011 census) and which has historical ties to Austria as being a part of the State of Tyrol prior to the Treaty of Saint-Germain in 1919.
Overall, Austrian German shares many common features with its neighbouring Bavarian dialects of German, especially in pronunciation (e.g. fully successful Phase 3 of the High German Consonant Shift). In grammar, the most noticeable features are more frequent usage of the auxiliary verb “sein“ (lit. “to be“) instead of usual German “haben“ (lit. “to have“) in perfect verb tense phrases and a prevailing usage of perfect tense over preterite forms in expressing the past tense. The vocabulary of Austrian German has been influenced mostly by the neighbouring Slavic languages, especially Czech in the north and Slovenian in the south,

as well as by Italian in South Tyrol. The influence is most apparent in words related to cuisine and daily life. These words found solely in the Austrian Standard German are called austriacisms and usually create doublets with their teutonic counterparts. Examples of false friends between austriacisms and teutonisms are existent as well, however are rather rare.

The Swiss Standard German is the standard language variety used as one of the four official languages in the Swiss Confederation (on the federal level; on the cantonal level seventeen cantons being unilingual German, three bilingual with French and the canton of Graubünden/Grisons being the only trilingual with Italian and Romansh) and it is the official standard used in the Principality of Liechtenstein as well. The Swiss German (alternatively referred to as Schwyzerdütsch) shares a lot of features with its neighbouring Alemannic dialects in Germany and is considered among the German speakers to be the hardest to mutually understand. In the Swiss phonology, the High German Consonant Shift is mostly retained with all of its changes (including velar shifts in Phase 1 and 2, found nowhere else). The vocabulary of Swiss German includes plethora of Romance languages‘ loanwords, especially from French and Italian. The orthography of Swiss Standard German introduces a few changes to the Austrian and German variety – such as not using the letter “ß“ (“es-zett“/“sharp s“) and replacing it with “ss“ in all positions or replacing the initial capital umlaut letters “Ä“, “Ö“ and “Ü“ with digraphs “Ae“, “Oe“ and “Ue“ in some proper names, however the actual frequency of this substitution overall is mostly dependent of the individual speaker. The words used solely in the Swiss Standard German as opposed to its Austrian and German varieties are called helvetisms. The most common examples might include the words of Romance languages‘ origin, easily distinguishable, and words with diminutive suffixes used in standard situations.

For the purpose of this thesis, the German Standard German variety is used. The phonetic system of GSG is further described below.

3.3 Development of Dutch

The Dutch language is a West Germanic language based on the various Low Franconian dialects spoken along the North Sea coast and by the lower reaches of the Rhine river. It is the most dominant one from the Istvaeonic group and forms the western part of the continental West Germanic languages‘ dialect continuum. The regulation body for the Dutch language is the Dutch Language Union (“Nederlandse Taalunie“), founded by a treaty between the Netherlands and the Flemish Community of Belgium on 9th September 1980, Surinam joined later in 2004 as an associate member.

The area, where Dutch is spoken, includes is original locations and the overseas territories, either still or previously held as colonies of the Kingdom of the Netherlands.
In Europe, Dutch is spoken as the main and official language of the Kingdom of the Netherlands and of the Flanders, the Dutch-speaking northern part of Belgium. Dutch is also the official language of the Republic of Suriname, a former Dutch colony in South America. The site Taaluniversum, the official website of the Dutch Language Union, suggests the figures of speakers to be 17 million in the Netherlands, six and a half million in Belgium and 400 thousand in Suriname, making it the total numbers of 24 million Dutch speakers.

Aside from these three main countries, Dutch is also the official language of the dependent territories of the Kingdom of the Netherlands in the Caribbean – the constituent countries Aruba, Curaçao and Sint Maarten as well as three special municipalities of Bonaire, Saba and Sint Eustatius, all of which were previously merged as one constituent country of the Netherlands Antilles until the formal reorganization 2010. In these dependencies, Dutch is usually accompanied by another language as official. The number of Dutch speakers in the Caribbean however oscillates around only 20 thousand speakers.

Historically, Dutch was spoken in the French Flanders, a portion of land historically belonging to the Spanish Netherlands (recently Belgium) with a Dutch population, which was ceded to France in 1659 after the Treaty of the Pyrenees, which ended a conflict between France and Spain then. The area roughly corresponds with the department Nord in the northern France. Throughout the time, the French language gained dominance in the region and the amount of Dutch speakers reported in 1999 reached twenty thousand people on a daily basis and sixty thousand occasionally.

Dutch was also spoken in the colonies of the Kingdom of the Netherlands, with a reasonable

linguistic influence in Indonesia and in South Africa, where a daughter language of Dutch, Afrikaans, subsequently developed (will be further discussed in one of the following chapters). There were several Dutch-based creole languages, however all of them are recently extinct. Dutch was also highly influential on other creole languages, which are used in the non-European lands of the Kingdom of the Netherlands, such as on Sranan Tongo – a creole language based mostly on English and used as lingua franca in Suriname, or Papiamento – based on Iberian languages and spoken on the ABC islands – Aruba, Bonaire and Curaçao.

3.3.1 Frankish

The earliest of the development of Dutch are connected to the Frankish tribes who inhabited the area between the rivers Weser and Rhine and spoke the Istvaeonic dialect of West German language. After the collapse of the Roman Empire, their habitat extended beyond the Rhine river to recent Belgium and northern parts of France, as well as to the south-east. The Frankish tribes further divided into two major group – Salian Franks and Ripuarian Franks (each labelled by the river along which their habitat spanned) and similarly did their languages. Whereas the language of Ripuarian Franks later developed into recent Central German Franconian dialects and the influence can be seen as far as in the Franconia sub-regions of Bavaria, the dialects spoken by the Salian Franks are furthermore referred to as Low Franconian dialects and these have been the base for the later Dutch language.

Since 6th century, the Frankish empire gained more power and area, however the dominant language remained Latin and the Frankish language (or rather a set of Frankish dialects). The Franks who migrated to the south to area of the ex-Roman province of Gaul merged with the local population and combined their language with the Vulgar Latin, which effectively created the ground for the development of Old French. In the purely Frankish speaking area of the Low Countries, the Low Franconian dialects split up into Old East Low Franconian, the ancestor of the contemporary Limburgish language, and Old West Low Franconian, from which the Old Dutch further developed.

There are sparse-to-zero pieces of evidence of the written Frankish language and most of the knowledge could be achieved through a reconstruction from the Old French loanwords from the Old Dutch. Moreover, the legacy of the Franks has remained in the name of the country as well.

3.3.2 Old Dutch

Old Dutch is a summative name for the group of Old West Low Franconian dialects, which were by the end of the first millennia already distinguishable from other West Germanic languages. More precise date of the transition from Old Frankish to Old Dutch cannot be precisely determined, however shall be connected to the innovations in the language. M. De Vaan (2017), p.32. claims that the division is connected to the time when either High German Consonant Shift features penetrated Old East Franconian (recent Limburgish) or when the assimilation of coastal dialect in which Ingvaeonic features appeared took place.

Phonetically, Old Dutch shared some features with both Old Saxon and Old High German as well as developed changes of its own. Among others, similarly to Old Saxon the diphthongs "ai" and "au" were monophthongised to "ē" and " ō" respectively and word-final "-z" was lost in monosyllabic words. With Old High German shared the dropping of word-initial "h-" in consonant clusters and "j" after two consonants, changing word-final "-jan" to "-en". Unique phenomena in Old Dutch then include Final-obstruent devoicing (which later spread to other languages as well, however Dutch was the first one to undergo the change), dropping of intervocalic "h", simplifying the consonant sequence "hs" [xs] into geminated "ss" and the voiceless fricatives [f], [θ] and [s] gaining their voiced counterparts [v], [ð] and [z] respectively as allophones. Regarding vowels, [u] was lowered to [o], merging the sounds together as opposed to [i] and [e] which later merged only if lengthened. The quality of "a" is however unknown (either front [a], central [ä] or back [ɑ]) as well as if there was a difference between long and short "a". By the end of Old Dutch, the unstressed vowels began to cease their quality and become schwa [ə], written as single "e".

The shift from Old Dutch towards Middle Dutch period is commonly accepted to happen in the mid-12th century. In that time, differences in orthography took place as well as other phonetical changes, which can be found in Middle Dutch texts.

The Old Dutch period also permanently settled the language border between Dutch and French speaking areas, roughly corresponding to the where the languages are spoken recently and effectively dissolved previously bilingual communities into monolingual areas.

3.3.3 Middle Dutch

The Middle Dutch period (sometimes referred to as "Diets") is usually dated between 1150 and 1500. It saw further developments of the Low Franconian dialects (still not as a single Dutch language) and first pieces of literature were written in this period.

The changes in phonetics from Old Dutch period were succeeded by some more innovations, which shaped some of the most distinctive features od Dutch recently.
For consonants, the voiceless fricatives [f], [θ] and [s] became voiced [v], [ð] and [z] word-initially; the dentals [ð], [θ] and geminated [θθ] became its respective stops: [d], [t] and geminated [ss], effectively eliminating the dental sounds from Dutch; the consonant cluster [ft] became [xt] and L-vocalisation took place, vocalizing the "dark l" sound [ɬ] (velarized alveolar lateral approximant) following "a" or "o" and preceding alveolar stops [d] and [t] into close back rounded vowel [u], and merging the two sequences into a single diphthong [ɔu̯]. Moreover, clusters [mb] and [ŋg] became geminized to [m:] and [ŋ:] respectively, the latter of which eliminating the voiced velar plosive [g] from Dutch; the [sk] sequence became [sx]; epenthetic "d" appear in sonorant clusters (contemporarily present only between "r" and gradation suffix "-er") and shortening of geminate consonants.
Vowels and diphthongs developed in Middle Dutch mostly towards their contemporary qualities. The long vowel [u:] was either shifted frontwards by an umlaut together with the diphthong [iu:], merging and resulting in [y:] or with [uw] in the diphthong [ɔu]; opening diphthongs "ie", "ia" and "io" merged into [iə], which eventually became [i:], similarly as [uə] (from previous [uo]) filled the blank space of [u:]; umlaut also shifted short back [u] to [ʏ], introducing this short vowel into Dutch; short [ɛ] became a diphthong [ɛɪ] when preceding a cluster of "n" and another consonant; word-final schwa [ə] began to disappear and open-syllable lengthening happened – making short vowels in opened stressed syllables become long. In this process, the resulting "ē" and "ī" merged together as [e:], [ʏ] became [ø:] and the quality of long "a" settled in [a:], as opposed to the short back [ɑ].

In the 16th, the Dutch language entered the period of Modern Dutch, in which only minor language changes happened (with the exception of Polder Dutch, see in the next chapter), and the crucial process of the language standardization commenced.
The phonetic system of contemporary Netherlandic Standard Dutch, utilized for this thesis, is listed in latter chapter.

3.3.4 Standard Dutch

The Dutch language in its official and codified form has a prescriptive norm known as Standard Dutch. It is regulated by the Taalunie, however some differences occur in Dutch spoken in the Netherlands, in Flanders, Belgium and in Suriname as well. Therefore, Dutch may be considered a pluricentric language.

The process of standardization of Dutch language commenced in the 16th century, corresponding with the transition from Middle Dutch to Modern Dutch period. In 1581, the Netherlands became an independent country (from Spain) as the United Provinces of the Netherlands (alternatively Republic of the Seven United Netherlands) as a Dutch nation state, where Dutch as well as Low Saxon and West Frisian was spoken. The key factor for the language standardization was the 1637 translation of the Bible, known as "Statenvertaling", in which expressions from various Dutch dialects were used, however mostly from the late 16th century urban dialects of Holland with additional words from Brabantian and Flemish. The standardized language was implemented in the United Provinces only, the Dutch in Southern Netherlands (Flanders, subjected to Belgium) did not underwent the process of language standardization until the 19th century after the independence of Belgium, as the previous dominant rulers opposed the idea. The language standard in Belgium, Flemish, retains the same orthography, however differs in pronunciation and the vocabulary includes more loanwords, especially from French.

Following the "Statenvertaling", the language has underwent only minor changes in all of its aspects. Since the 1970s however, a recent phenomenon known as Polder Dutch appeared. The innovations include lowering of diphthongs [ɛɪ], [ɔu] and [œy] to [aɪ], [au] and [ay] and diphthongization of the stressed vowels [e:], [o:] and [ø:] to [ei], [ou] and [øy] respectively. These changes are however regionally restricted to the Hollandic dialects in the provinces of South and North Holland and Utrecht, in other Dutch-speaking areas and dialect do not occur at all.

In 1980, the Taalunie was founded by the Taalunion Treaty between the governments? of the Netherlands and the Flemish Community of Belgium, in order to closely cooperate in the future language changes in Dutch, which have to be furthermore co-regulated and accepted by both sides in the Netherlands and in Belgium. Suriname joined the Taalunie as an associate member in 2004 and South Africa and Indonesia hold a status of “special partner“ countries.

3.3.5 Dialects of Dutch

The Dutch language comprises various dialects, which are frequently spoken even in formal situations in the Netherlands and Belgium. There are five major dialectal areas of Dutch, three of which are Low Franconian dialects, in the other two other languages dominate, however they are still part of the continental West Germanic dialect continuum and are to some extent mutually understandable with each other. For the exact description, see the left side of the Picture 1 (page 26).

The Low Franconian dialects can be sub-divided into three traditional groups: Flemish, Hollandic and Brabantian. The Flemish dialects include Zeeuws (Zeelandic, as nr. 18), Oost-Vlaams (East Flemish, as nr. 19) and West-Vlaams (West Flemish; as nr. 20) - these are spoken in the south-west of the Netherlands and in the west Flanders region of Belgium. The Hollandic dialects include Hollands (Hollandic; as nr. 16), which comprises even more sub-dialects spoken in the western Netherlands and the Eastern Hollandic dialect of Utrechts-Alblasserwaards (as nr. 15) is usually included as well. The Brabantian group of Dutch dialects include Brabants (Brabantian; as nr. 17) and Zuid-Gelders (South Guelderish; as nr. 14) and are spoken by the majority of Dutch-speaking Flemish people in Belgium as well as in southern and eastern parts of the Netherlands.

Into the Low Franconian group of dialects would also fit under the number 13 Limburgish, which is in the Netherlands recognized as a separate language, whereas in Belgium holds the status of a dialect only. Limburgish is, as mentioned above, spoken alongside the tri-border of Belgium, Germany and the Netherlands, where is it spoken in the province of Limburg in the south-eastern part of the country. In the north-eastern part of the Netherlands Low Saxon dialects are spoken, as mentioned in the chapter German dialects before. The four mentioned dialects are Gronings (8), Drents (9), Gelders-Overijssel (10) and Twents (11) and are in the Netherlands collectively referred to as Dutch Low Saxon. The remaining fifth dialectal group in the Netherlands is the province of Friesland, where Frysk (Frisian; as nr. 33) is spoken and is recognized as a co-official language along with Dutch in the province.

Moreover, the newly reclaimed land, which makes up majority of the Flevoland province in the Netherlands, is traditionally agreed as having no dialect, given its short existence as the land reclamation took place in the 1950s and 1960s and there has not passed enough time since then so that a specific dialect could have developed.

3.3.5.1 Afrikaans

Afrikaans is a daughter language of Dutch, which has developed from the Dutch spoken in the Cape colony in today's South Africa. Afrikaans split from the Dutch in the 18th century and prior to being recognized as a separate language, it was a dialect of Dutch with a deficiency of prestige (referred to as "kombuistaal"; lit. "kitchen language" by other Dutch speakers). Hans den Besten (1989) expressed the theory, that Afrikaans arose from two sources – Cape Dutch and Hottentot Dutch, a Dutch-based pidgin and a creole derived from it – and reject both the labels for Afrikaans to be neither a creole nor a daughter language of Dutch. Nevertheless, Afrikaans was recognized as a separate language in 1925 by the Official Languages of the Union Act of the South African parliament.

Afrikaans slightly differs from Dutch in orthography, although most of it is preserved, and in grammar, e.g. by no conjugation of verbs depending on subject, no distinction between infinitive and present tense, dropping the preterite tense with a few exceptions and allowed usage of double negation. Moreover, the vocabulary is predominantly Dutch in origin (estimated 90 – 95%), however Afrikaans has adopted loanwords from the Khoisan languages native to south Africa and other languages used by the mixed population of white Europeans and slaves brought over from other parts of world.

Afrikaans is an official language in South Africa and a recognized minority language in neighbouring Namibia. It is regulated by Die Taalkommissie (lit. "The language committee") based in Bloemfontein since 1909 and according to Ethnologue in spoken by approx. 7,2 million people, vast majority of whom live in the Northern Cape, Western Cape and Gauteng provinces of South Africa.

3.4 Development of English

The English language belongs to the Ingvaeonic group of West Germanic languages. Its initial language area was located on the island of Great Britain, however mostly due to the colonial period of the British empire and the political significance of the United States of America as a modern super-power it is contemporarily spoken on each of the Earth‘s continents either as a native language, lingua franca, learned language or as a most usual language of international communication. Crystal D. (2006, pp. 424-426) mentions the figures of speakers 360 to 400 million L1 speakers, approx. 750 million L2 speakers and 600 to 700 million foreign language learners, which suggests there are more than 2 billion anglophone people on varying levels of knowledge, making it the most extensively used language in the world. English is obviously a pluricentric language with multiple language standards, many creole languages and pidgins are based on English as well, and according to Crystal, D. (2003a) it is the oftenmost taught foreign language worldwide.

Geographical distribution of English in Europe is situated mostly on the British Isles, where it is the de-facto official language of the United Kingdom of Great Britain and Northern Ireland (with de-jure official status in Scotland and Wales) and it is one of the two official languages of the Republic of Ireland, alongside Irish. English retains official language status on Malta and Cyprus as well as in the dependent territories of the United Kingdom – Isle of Man, the Channel Islands (Guernsey and Jersey) and Gibraltar in Europe and all others elsewhere.
In North America, English is the primary language in Canada (with the exception of mostly francophone province of Quebec), in the United States of America with all its subjected territories and in Belize in mainland Central America as well as in the Caribbean countries Antigua and Barbuda, the Bahamas, Barbados, Dominica, Grenada, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines and Trinidad and Tobago.
In South America, English is the official language in Guyana and on the Falkland Islands, which belong under the British sovereignty.
Many African countries use English as either language of administrative (a de jure official language) or as a lingua franca for the native languages, namely Botswana, Burundi, Cameroon, Eritrea, eSwatini, Ethiopia, the Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mauritius, Namibia, Nigeria, Rwanda, the Seychelles, Sierra Leone, South Africa, South Sudan, Sudan, Tanzania, Uganda, Zambia and Zimbabwe. Most of these countries were previously colonies of the British Empire.
Similar situation is in Asia, where English is one the official languages in Pakistan, India, Sri

Lanka, Myanmar, Malaysia, Singapore, Brunei, on the Philippines and in Hong Kong and Macao Special Administrative Regions of the People's Republic of China, out of which only in Singapore being the primary language within its society.
On the other hand, English is the dominant language in the Commonwealth of Australia with its external territories Norfolk Island, Christmas Island and Cocos (Keeling) Island, on New Zealand including Niue, Tokelau and the Cook Islands. The official language status retains English also in multiple sovereign countries in Oceania, namely Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Palau, Papua-New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.
Several creole languages and pidgins are based on English alongside either other European or the native languages as well, mostly spoken in countries in the Caribbean and Pacific Ocean, which were previously subjected to the British Empire as colonies.

Out of all the countries, the five biggest English-speaking countries are referred to as "core Anglosphere", which includes United Kingdom, United States, Canada, Australia and New Zealand. The language varieties in these countries, which are pre-scripted as Standard English in respective countries, are: British English in the United Kingdom (specifically England and Wales as opposed to Scottish English in Scotland), General American English in the U.S.A., Standard Canadian English in Canada, General Australian English in Australia and New Zealand English in New Zealand with many traditional Maori expressions extending the vocabulary. Other noteworthy varieties include Hiberno-English in Ireland and its four dialects corresponding with the historical provinces of Ireland – Connacht, Munster, Leinster and Ulster; or South African English in South Africa and Indian English in India.

English is furthermore the official communication language of aviation, maritime navigation and astronautic communication (spoken on the International Space Station together with Russian), as well as various international organization in all fields of human activity, such as sports (e.g. International Olympic Committee) or politics (one of the five official languages of the United Nations).

3.4.1 Old English

English commenced its development following the arrival of the Anglo-Saxon tribes on the island of Great Britain. The tribal group includes Anglian, who originally settled on the Anglian peninsula in today's northern Germany along the Baltic sea coast; Saxons, who spanned across northern Germany, originally between North Sea and Elbe and Saale rivers, later even further with the process of Ostsiedlung, and Jutes, who occupied the southern part of Jutland peninsula in today's Denmark. These tribes had brought their languages to the Great Britain and based on those the earliest stages of English were founded. In the late centuries of the first millennium, many Danish settlers migrated to the Great Britain and brought their language, Old Norse, with them, which in return became the first major foreign influence on English. Combined with the tribal settlements in England, four major dialectal areas were established - Northumbrian to the north, Mercian (alternatively "Anglian") located centrally and settled by the Anglian, Kentish on the Kent peninsula settled mostly by the Jutes and West Saxon to the west from the river Thames, settled mostly by the Saxons. The Old Norse influence on the English language lasted until the battle of Hastings, after which French took over the dominant role in the enrichment of the English language. The date 1066 may be therefore treated as the end of the Old English period.

Phonetically, English shared its initial development with Frisian until the split of the languages in the Early Middle Ages. Two major changes are essential in the early Anglo-Frisian common development, and thus Ingvaeonic nasal spirant law and Anglo-Frisian brightening. By the time the second mentioned occurred, the languages were already developing differently from each other as Old English and Old Frisian.

Ingvaeonic nasal spirant law was a sound change which affected sequences of a vowel followed by a nasal and a fricative consonant. At first, the nasal quality was transferred from the nasal consonant to the preceding vowel, which would result in a nasalized vowel dropping of the nasal consonant. Furthermore, the vowel got lengthened and in a short time later also denasalized. In that time, the Anglo-Frisian brightening (Second a-fronting) already took place. The a-fronting happened in two phases. The first a-fronting shifted the originally back long “ā” [ɑ:] frontwards to become “ǣ” [æ:] and with the exception of West-Saxon dialect later raised to become “ē” [e:]. The a-fronting was not applied when the original “ā” was followed by a nasal consonant “n” or “m” or if it was nasalized (therefore the results of Ingaveonic spirant law did not underlie the shift). These sequences were later raised to “ōn”, “ōm” and nasalized “ō”. The blank place of [ɑ:] was filled by a monophthongisation of an

original diphthong “ai”. The second a-fronting shifted the short counterpart [ɑ] to [æ], however only in stressed syllables. The sequences with “n”, “m” or the nasal vowel were not affected similarly to the first phase.

The Old English period saw many more changes to the English language, which varied through the dialect continuum of Great Britain, but usually did not reach across the sea to the Netherlands and further within the continental West Germanic dialect continuum.

Diphthong height harmonization straightened the quality of resulting [u] sound in original West Germanic diphthongs “au” [ɑu]; meanwhile fronted to [æu]), “eu” [eu] and “iu” [iu] according to the initial vowel which would become long to [æ:u], [e:o] and [i:u], written “ēa”, “ēo” and “īo” respectively. Vowel breaking and retraction similarly changed front vowels as follows: short “i” > “iu” when preceding “h”, “w” (not in “-wi-” sequence) and “r” plus another consonant; short “e” > “eo” under same circumstances as well as before [lh] and [lk] clusters; short “æ” > “æa” [æɑ] when preceding “h” and consonant clusters with “r” or “l” in the initial position; and both long “ī” and “ǣ” became [i:u] and [æ:ɑ] before “h”.

After the breaking, remaining short [æ] and in some dialects long [æ:] underwent the process of a-restoration, in which the sound was shifted backwards to [ɑ], however consequently further shifted back by the Second a-fronting, which furthermore lifted previous [æ] to [e] in all dialects but West-Saxon.

Velar consonants underwent palatalization in Old English, each of them under different circumstances. Voiceless velar plosive [k] became the voiceless post-alveolar affricate [t͡ʃ] when preceding front vowels or diphthongs word-initially, after [i] and [i:] and before [i], [i:] and [j]. The sequence [sk] (written as “sc” in Old English) became the voiceless post-alveolar fricative [ʃ] word-initially in all position and after [e], [e:], [æ] and [æ:] if no back vowel followed in the next syllable. Voiced velar plosive [g] became the voiced post-alveolar affricate [d͡ʒ] before [i], [i:] and [j] and finally the voiced velar fricative [ɣ] became the palatal approximant [j] through the metaphase of a voiced palatal fricative [ʝ] (otherwise it would be affected by j-loss later on) when preceding [i], [i:] and [j], after [e], [e:], [æ] and [æ:] if no back vowel occurred in the following syllable and word-initially before front vowels and diphthongs. The affricates [t͡ʃ] and [d͡ʒ] would in later stages of development return to [k] and [g] after following vowels are dropped and a consonant would immediately follow. The Old Norse loanwords were not affected by the palatalization, therefore doublets such as “shirt” and “skirt” may appear in English. Subsequently, a palatal diphthongization took place and produced shifts “e” > “ie”, “ē” > “īe”, “æ” > “ea”, “ǣ” > “ēa”, “u” > “eo” and “o” > “ea” after “ċ” [t͡ʃ], “ġ” [j] and “sċ” [ʃ].

Metathesis of “r” introduced switching places of “r” and a following short vowel, if “s”, “n” or “d” followed afterwards in some words.
I-umlaut (alt. “i-mutation” or “Germanic umlaut”) applied to vowels, if in the next syllable either [i], [i:] or [j] appeared. The process would either shift the back vowels to the front ([u] > [y]; [o] > [ø]; [ɑ] > [æ]) or raise the front vowel ([æ] > [e]; [e] > [i]), all leading to the front close position, therefore the name i-umlaut.
Final a-loss would eliminate word-final unstressed open vowels. If “-j-”, “-ij-“ or “-w-“ preceded, then would become vocalized to “i”, “ī” and “u” respectively. The process of Final a-loss is assumed to take place after the vowel breaking and a-restoration.
Medial syncopation encompassed reduction of short open and mid vowels [a], [æ] and [e] in open syllables at all positions. Short close vowels [i] and [u] are deleted in open syllables following a long syllable, however remain after a short syllable.
Word-internal “-j-“ and “-ij-“ were reduced after a long syllable, except for [j], which would arise as a product of palatalization of [ɣ] through [j].
Back mutation broke short vowels “e”, “i” and “a” into diphthongs “eo”, “io” and “ea” respectively, if a back vowel appeared in the following syllable. The diphthong “io” merged into “eo” in late Old English. The back mutation applied when preceding a single consonant.
Anglian smoothing reversed some results of vowel breaking when preceding “r” or “l” and either before or after a velar “h” ([x]), “k” or “g”, so that “īo” > “ī”, “io” > “i”, “ēo” > “ē”, “eo” > “e” and “ēa” > “ē “. The original diphthong “ea” became “æ” before velars and “e” before “r” and “l” followed by another velar.
H-loss dropped word-internal “h” intervocalically and between a consonant and a vowel. Additionally, if a preceding vowel was previously short, it became lengthened, and a following short vowel gets absorbed by it.
Vowel assimilation furthermore smashed together two alongside appearing vowels created by “h”, “j” or “w”-droppings into either one long vowel or a diphthong in case of “i” and “e” combined with a back vowel.
Palatal umlaut shifted “e”, “eo” and “io” into “i” when preceding word-final consonant cluster introduced by [x]: “-ht”, “-hs” and “hth” (in Old English written as “-hþ”).
And finally homorganic vowel lengthening affected short stressed vowels preceding consonant clusters “-ld-“, “-mb-“, “-nd-“, “-ng-“, “-rd-“, “-rl-“ and “-rn-“ plus “-rs-“ followed by a vowel. Some of those, especially those with “r” and another consonant, would become shortened again in Middle English.
The extent of changes varied depending on the individual dialect. Following the socio-

political changes following the battle of Hastings in and French overtaking as the dominant language influence on English, the division point between Old English and Middle English is usually settled to this time.

3.4.2 Middle English

The delimitation of Middle English usually starts after the Norman conquest in 1066 and the end is placed into 15th century due to several sound changes, which occurred in English at that time and mark the beginning of the Early Modern English period.
The French, especially the dialect spoken in Normandy, influenced especially the vocabulary of English. French was also the language of nobility and a "prestigious" language (as an analogy to recent official language status), whereas English was spoken by lower-class people and on the countryside. During Middle English the language shifted from a synthetic towards an analytic one. Grammar of English altered as well, the case system was basically dissolved with only genitive form of nouns left with the possessive suffix "-s", which furthermore outbalanced "-en" in plural forms, leaving only a few exception such as "children" or "brethren". The orthography got adjusted to the extent used ever since, leaving the letters "ƿ" (wynn, for [w]), "þ" (thorn, for [θ]) and "ð" (eth, for [ð]), which originated from the runic script used prior to the introduction of Latin script and were replaced by "w" for [w] and by the digraph "th" for both voiced and voiceless dental fricatives.

The phonological innovations introduced in the Middle English period include diphthong smoothing of [æɑ], [æːɑ], [eo] and [eːo] to monophthongs [æ], [æː], [ø] and [øː] respectively. Stressed vowel changes applied to long [æː] becoming [ɛː], long [ɑː] being raised similarly to [ɔː] and short [æ] and [ɑ] merging together as [a]. The front rounded vowels were eliminated from the language in Middle English when being unrounded as follows: [ø] > [e], [øː] > [eː], [y] > [i] and [yː] > [iː]. The voiced velar fricative [ɣ], which already appeared in the language only as an allophone of [g] post-vocalically, was finally eliminated from the language by changing into a rounded back close vowel [u] and thereby creating a set of new diphthongs by combining with vowels, namely [au], [ɛu], [eu], [iu], [ɔu] and [ou]. Similarly did "j" create [ai], [ɛi] and [ei], whereas [ɔi] and [ui] were introduced in French loanwords. Some of the diphthongs however subsequently further changed: [ei] > [iː], [ou] > [uː], [eu] > [iu] and [ai] merged with [ɛi]. Short vowels were lengthened in open syllables and with the exception of [a] also lowered. If there were two more syllables after the stressed one, the process was reversed by trisyllabic laxing. Following the open syllable lengthening, subsequent geminate

consonants were reduced and vowels were shortened when preceding a cluster of two and more consonants, except for "-st". Moreover, the word-initial "h" was dropped from the "hl-", "hr-" and "hn-" clusters, [mb] and [mn] sequences were reduced and merged into single [m] realization, [sw] got simplified to [s] before a back vowel as well as did the previously Norman-introduced voiceless alveolar affricate [t͡s] – the remaining affricates [t͡ʃ] and [d͡ʒ] were not affected.
In the late Middle English period, the h-loss was finished, when both of its allophones in the coda position – the voiceless velar fricative [x] after back vowels and the voiceless palatal fricative [ç] after front vowels developed into [f] from [x] or completely disappeared in case of [ç]. Short close vowels [i] and [u] changed its quality to [ɪ] and [ʏ] respectively and finally the sequences "al" and "ol" undergo several mutations when followed by certain consonants: when preceding coronal consonants, they become [aul] and [ɔul] respectively and in later development [ɔ:l] and [oul]; before [k] is furthermore lost the "l" resulting in [ɔ:] and [ou]; before labiodentals the "l" gets lost as well, resulting in sequence [af], [av], [ɔf, however [ɔlv] remains unchanged; and before [m] the realization [ɑ:] and [o:] are present.

The presence of the phenomenon known as Great Vowel Shift is usually acknowledged as the time frame when Early Modern English period started, situated in the 15th century.

3.4.3 Early Modern English

Early Modern English period, which is usually dated to last from mid-15th to mid-17th century, saw the language development of English into its roughly present form. The literary work written in Early Modern English is said to be still comprehensible for contemporary English speakers today, as opposed to Middle English authors, such as Geoffrey Chaucer, although the orthography of the language was still not settled in its recent form. This issue gained important after the invention of printing press by William Caxton in 1476 and subsequent massive spread of printed literature. Furthermore, in EME period the era of standard language prevailed over the set of individual dialect formed a millennium prior.

The beginning of the Early Modern English period is usually connected to the phenomenon of Great Vowel Shift, when the original seven long vowels of Middle English changed their quality, however did not merge with one another and thereby seven new realization arose, some of which diphthongs. The shifting process is accepted to happen in two phases.
The first phase included the push chain, in which the original mid-close long vowels [e:] and

[oː] were raised to close [iː] and [uː], whereas the original close vowels [iː] and [uː] became closing diphthongs [ei] and [ou] respectively. The two new diphthongs later gradually changed their quality to [ɛi] and [ɔu], [əi] and [əu] and finally in Modern English period to their contemporary realizations [aɪ] and [aʊ]. Various scholars debate the sequence and suggest immediate change from [iː] and [uː] to [əi] and [əu] skipping the phase [ɛi] and [ɔu], such as Dobson (1968), Kökeritz (1953) or Cercignani (1981).
The second phase the mid-open long vowels [ɛː] and [ɔː] were raised to become mid-close long vowels [eː] and [oː] replacing the previous ones already shifted to [iː] and [uː], as well as raising the original long [aː] through a medial phase [æː] to [ɛː].
In the same period as Great Vowel Shift, the remaining Middle English diphthongs, which did not merge or monophthongise before, were mostly lost. The pane-pain and toe-tow mergers meant that in the [ɛi] and [ɔu] diphthongs the initial vowel got raised ([ei] and [ou]) and the sequences were monophthongised to [eː] and [oː] respectively. The diphthong [au] was monophthongised to long [ɔː], [ɛu] and [iu] merged into a single diphthong [ɪʊ], which would later become modern [juː] and finally [ɔi] and [ui] merged into [oi], which is the only surviving of these diphthongs to recent times as [ɔɪ].
In the Early Modern English furthermore took place Ng-coalescence - the "ng" consonant cluster previously pronounced [ŋg] coalesced into simple [ŋ], and a Yod-coalescence, in which the consonant sequences [tj], [sj], [dj], [zj] and "-tion" suffix [sjən], used primarily in French and Latin loanwords, became palatalized to [t͡ʃ], [ʃ], [d͡ʒ], [ʒ] and [ʃən] respectively. The phoneme [ʒ] was newly introduced to English by this process.
The word-initial consonant clusters [gn] and [kn] were reduced to simple [n] and in some loanwords, the word-initial "h" was dropped.

The transition from Early Modern English to Modern English period is usually dated the the mid-17th century around the time of Interregnum and Stuart Restoration. Some scholars already include Early Modern English into Modern English and omit the division overall.

3.4.4 Modern English

As the Modern English is described the period of English language development since the mid-17th century (authors who omit the difference between Early Modern English and Modern English would suggest mid-15th century instead) until present times. During this period, English developed to its recently spoken form, the language varieties evolved from the original British English brought over to the respective countries and continents and the

orthography and pronunciation settled. Received Pronunciation, the standard British accent of pronunciation which is used in the analysis part of this thesis, was introduced in the beginning of the 20th century.

If the following phonological changes succeeded only in some language varieties, the notice is provided. Moreover, some of the first changes mentioned below might have been developed in Early Modern English already - the classification in this thesis respects the initial sources.

The realization of the letter "r" shifted from the alveolar trill [r] to either retroflex approximant [ɻ] in General American or post-alveolar approximant [ɹ] in British English. Furthermore, British English (and other major varieties developed from it, such as General Australian New Zealand English or South African) became a non-rhotic language, when the syllable-final "r" ceased to be realized, which introduced on one hand the centric diphthongs [ɪə], [ʊə], [ɔə] and [eə] and on the other changed qualities of preceding short vowels – [a] and [ɔ] were prolonged to [aː] and [ɔː] respectively and [ɛ], [ɪ], [ʌ] and [ʊ] merged into "long schwa" [ɜː]. The vowel [ʌ] was introduced as a product of unrounded [ʊ] following the foot-strut split and quality adjustment from the medial phase of [ɤ], unless preceded by a labial and followed by a non-velar, according to Dobson (1968:720).
In some words, [eː] and [uː] produced by the Great Vowel Shift were shortened, mostly when preceding [t], [d], [θ] or [ð], the subsequent [uː] > [ʊ] shift could have been impacted by the foot-strut split. The long vowels [eː] and [iː], written as "ea" and "ee" were united to [iː] in meet-meat merger, long [uː] written as "oo" was shortened to [ʊ] in many words and the short [a] changed its quality to either short [æ] or long [ɑː]. American English (especially) moreover underwent the loth-cloth split, in which the original [ɑ] was either lengthened to [ɑː] or even raised to [ɔː]. In some dialects, the split was undone by the cot-caught merger. The trap-bath split shifted the front vowel [æ] backwards to [ɑː] in some words in Southern England English including Received Pronunciation. In most varieties were furthermore successful following innovations: [eː] and [oː] produced by the Great Vowel Shift became respective diphthongs [eɪ] and [oʊ] (Scottish and Northern English excluded), the voiceless allophone [ʍ] merged with the voiced [w] in wine-whine merger (Scottish, Irish, South American and New England English excluded), the alveolar plosives [t] and [d] took up the flap realization [ɾ] intervocalically and when preceding a syllabic consonant except for [n̩] where glottal stop [ʔ] is realised instead (case of Canadian, American, Australian and New Zealand English) and happy-tensing of word-final [ɪ] to [i]. Received Pronunciation was not affected by the H-dropping in Welsh English and some dialects of England nor by line-loin

merger of [aɪ] and [ɔɪ] diphthongs.

In the recent-most period, Received Pronunciation undergoes the centring diphthongs' and triphthongs' smoothing, which is described below in the English chapter of Contemporary phonology and orthography and the diphthongs [oʊ] is realized as [əʊ]. In other language varieties appear different phenomena, such as various changes to the vowel [æ] or to the dental consonants, pin-pen merger, fronting of back vowels, t-glottalization, l-vocalization, j-dropping in consonant clusters or the Northern Cities Vowel Shift in America. These changes are however in various stages of its progress.

4. Contemporary phonology and orthography

In this chapter are enlisted the recent phonetic systems of the studied languages with the respective orthography. The languages are sorted in the order equal to the previous chapters and within the languages are listed firstly consonants, secondly vowels and finally diphthongs and possible triphthongs. In the tables for consonants, when two phonemes appear in the same box, the first one is the voiceless and the other one the voiced counterpart of the same place and manner of pronunciation. If there are two vowels realized in the same place and manner, the first one is the unrounded and the other one is the rounded counterpart. If a colon is present in the brackets, both short and long vowel of the same quality are present in the language. In the orthographic transcriptions are mentioned the most common realizations and are valid for the words of Germanic origin, which will be the subject of the practical part of the thesis. The utilized language varieties include German Standard German for German, Netherlandic Standard Dutch for Dutch and Received Pronunciation for English.

4.1 German

Hereby follows the tables of consonants, vowels and diphthongs with their most common orthographical realisations in the words of Germanic origin. The information has been achieved from the Duden Aussprachewörterbuch (6th ed.), which is generally seen as the prescriptive norm for the pronunciation, although it is not codified ant he official level.

Consonants	Bilabial	Labiodent.	Alveolar	Postalv.	Palatal	Velar	Uvular	Glottal
Nasal	m		n			ŋ		
Plosive	p b		t d			k g		ʔ
Affricate	p͡f		t͡s	t͡ʃ (d͡ʒ)				
Fricative		f v	s z	ʃ (ʒ)	ç (j)	x	χ ʁ	h
Approximant					j			
Lateral			l					
Trill			r				ʀ	

[m] : "m" [f] : “f”, “v” [v] : “w” [n] : "n" [ŋ] : "ng"

[p] : "p" [t] : "t", "-dt" [d] : "d" [k] : "k", "-ck" [g] : "g"

[b] : "b" [s] : “ß”, “ss”, “-s” [z] : “s” [ʃ] : “sch”

[pf] : “pf” [t͡s] : “z”, “-tz” [ç]/[x]/[χ]: “ch” [ʔ] : no letter

[l] : “l” [t͡ʃ] : “tsch” [r]/[ʀ]/[ʁ]: “r” [j] : “j” [h] : “h”

- the glottal stop [ʔ] appears in German only in the stressed syllable preceding the initial vowel and is neither considered an individual phoneme nor marked by a grapheme
- the letter “j” is usually realised as a palatal approximant, however some scholars such as Hall (2003) claim, that the realisation may vary between a palatal approximant [j] and a voiced palatal fricative [ʝ]. For the purpose of the thesis, the [j] transcription will be used.
- the realisation of the letter “r” usually depends on the individual speaker – either as an alveolar trill [r], an uvular trill [ʀ] or a voiced uvular fricative [ʁ]. In this thesis, the transcription with [r] will be utilized.
    - in the coda position of a syllable, “r” is vocalised and becomes an unrounded open central vowel [ɐ].
- the letter “h” represents in German the voiceless glottal fricative [h] word-initially and a prolongation marker of the preceding vowel in the coda-position of a syllable.
- the digraph “ch” may in German take up three allophonic realisation depending on the quality of the following vowel:
    - voiceless palatal fricative [ç] (“Ich-Laut”) is realised when following a front vowel, diphthongs [ɔʏ] and [aɪ], vocalized “r” [ɐ] or any other consonant, as well as when preceding the suffixes “-ig”, “-lich”, “-chen”
    - voiceless velar fricative [x] (“Ach-Laut”) is realised when following a back or open vowel or the diphthong [aʊ]
    - voiceless uvular fricative [χ] is according to Kohler (1977) and Kohler (1990) the allophone realized after [a] and [a:] and a more usual alternative to [x] after [ʊ], [ɔ] and [aʊ]. For the purpose of this thesis, the transcription with [x] will be used also for the cases when [χ] would be realized according to Kohler.
- the letter “s” in consonant clusters “st” and “sp” is word-initially and word-internally pronounced as a postalveolar [ʃ]: [ʃt] and [ʃp] respectively
- the letter "x" and word final "-chs" are realised by the consonant cluster [ks]
- the letter "q" in German appears only in a word-initial cluster "qu-", realised as [kv]
- the letter “c” is not used in words of German origins independently, only in word-final “-ck” (geminate “k”) and in loanwords, where it retains the original pronunciation
- the letter "n" in pronounced [ŋ] when preceding velars ([k], [g] and [x])
- the digraph “ph” in loanwords is realized as a voiceless labiodental fricative [f]
- the letter “v” is realised in loanwords in a voiced manner as [v], opposing the common

voiceless realisation in the native words of German origin.

- in the English loanwords, the dental fricatives [θ] and [ð] may appear, or might be alternatively realised as alveolar fricatives [s] and [z]
- the voiced postalveolar fricative [ʒ] and affricate [d͡ʒ] appear in loanwords either retaining their original quality or as their voiceless counterparts [ʃ] and [t͡ʃ] respectively.
- the voiceless plosives [p], [t] and [k] are aspirated in the stressed syllables when followed by a vowel, not in consonant clusters
    - affricates [p͡f], [t͡s] and [t͡ʃ] are never aspirated
- the voiced plosives [b], [d] and [g] undergo terminal devoicing to [p], [t] and [k] respectively in a word-final position
- [l], [m] and [n] become syllable forming [l̩], [m̩] and [n̩] in word-final suffixes “-el”, ”-em” and ”-en” respectively, replacing the schwa [ə] for the “e” letter

The sibilant orthography in German, obeys these four basic rules as follows:
1) the ligature "ß" ("scharfes es"/"es-zett") indicates the voiceless alveolar fricative [s] and prolongs the preceding vowel. The ligature "ß" may be written in central or final position, but never in the initial position, therefore it appears mostly as a miniscule. The capital letter “ẞ” was adopted in 2017 for the usage in all-caps inscriptions. The letter “ß” is no more used in the Swiss Standard German and was replaced by "ss" in all positions.
2) the geminate letter "ss" ("Doppel-es") indicates the voiceless alveolar fricative [s] and shortens the preceding vowel.
3) the single letter "s" indicates the voiced alveolar fricative [z] in word-initial and central position and the voiceless alveolar fricative [s] in word-final position. In the Austrian Standard German, in the word-initial position it is pronounced voiceless.
4) the letter "z" indicates the voiceless alveolar affricate [t͡s], as in Italian. The previous rules for prolongation apply in the same way – a single letter lengthens, a double letter shortens.

Vowels	Front	Mid-Front	Central	Mid-back	Back
Closed	i:	y:			u:
		ɪ ʏ		ʊ	
Mid-closed	e:	ø:			o:
			ə		
Mid-open	ɛ(:)	œ			ɔ
			ɐ		
Open			a(:)		

[iː]	: "i", "ie"	[yː]	: "ü", "üh", "y"	[uː]	: "u", "uh"
[ɪ]	: "i"	[ʏ]	: "ü", "y"	[ʊ]	: "u"
[eː]	: "e", "eh", "ee"	[øː]	: "ö", "öh"	[oː]	: "o", "oh", "oo"
[ɛ]	: "ä", "e"	[œ]	: "ö"	[ɔ]	: "o"
[ɛː]	: "ä", "äh"	[a]	: "a"	[aː]	: "a", "ah", "aa"

[a-schwa (ɐ)]: vocalised “r” / "-er"

[e-schwa (ə)]: unstressed "e" and word-final "-e"

For the orthography of vowels in German apply these basic principles:

- a vowel followed by a geminate consonant is always short
- a vowel followed by a consonant and another vowel is always long
- the letter "h" in coda position of the syllable prolongs the preceding vowel
- the letter "y" appears only in non-native words

There are three closing diphthongs in Standard German:

[ɔʏ] : "eu", "äu"

[aɪ] : "ei", "ai", "ey", "ay"

[aʊ] : "au"

Furthermore, a closing diphthong [ʊɪ] may appear in interjections, opening diphthong [oa] appears in French loanwords and [ɛɪ] and [ɔʊ] in English loanwords, however their quality is usually altered either by closing the initial vowel ([eɪ] and [oʊ]) or by monophthongisation to [eː] and [oː] respectively. The orthography in the loanwords usually remains true to the original language.

If a single letter is followed by a vocalised “r“, the resulting sequence is not treated as a diphthong but as two independent vowels. Therefore also no triphthongs can be created as combinations of the three diphthongs [ɔʏ], [aɪ] and [aʊ] with a vocalized “r“ in coda position of a syllable. All sequences of either vowels or diphthongs combined with vocalised “r“ never undergo smoothing and are always realised completely.

The overall orthography of German does not use any diacritic markers with the exception of umlaut in letters “ä“, “ö“ and “ü“. The exact shape of umlaut markings is not prescribed and therefore double dots (¨), acute accents (˝), a macron (¯) or a tilde (˜) may be used, however double dots are the most frequent means of umlaut inscription.

4.2 Dutch

Similarly to German, the Dutch language has the prescribed spelling and orthography, regulated by the Taalunie, however the single pronunciation standard of the language is not settled. For this thesis, the tables of Dutch phonemes will be based on information from Gussenhoven (1999) and Collins & Meer (2003).

Consonants	Bilabial	Labiodent.	Alveolar	Postalv.	Palatal	Velar	Uvular	Glottal
Nasal	m		n		(ɲ)	ŋ		
Plosive	p b		t d		(c) (ɟ)	k (g)		(ʔ)
Affricate								
Fricative		f v	s z	(ʃ) (ʒ)		x ɣ	(χ) (ʁ)	ɦ
Approximant		ʋ			j			
Lateral			l					
Trill			r				ʀ	

[m]	: “m”	[n]	: “n”	[ŋ]	: “ng”	[ʔ]	: no letter
[p]	: “p”, “-b“	[t]	: “t“, “-d”	[k]	: “k”	[ɦ]	: “h”
[b]	: “b”	[d]	: “d“	[x]	: “ch”, “-g”	[r]/[ʀ]/[ʁ]: “r”	
[f]	: “f“	[s]	: “s”	[ɣ]	: “g”	[l]	: “l”
[v]	: “v“	[z]	: ”z”	[j]	: “j”	[ʋ]	: “w“

- the glottal stop [ʔ] appears in Dutch similarly to German only in the stressed syllable preceding its initial vowel and has no individual grapheme
- the voiced velar plosive [g] is a non-native phoneme in Dutch and appears either as a voiced allophone of [k] by voicing assimilation or in loanwords from other languages
- the quality of “g” sounds may vary between the velar ([x] and [ɣ]), uvular ([χ]and [ʁ]) and in some dialects even glottal ([h] and [ɦ]). In this thesis, the velar realization (the most common one) will be used in transcriptions. Netherlandic Dutch furthermore merges both the voiced and voiceless counterparts into one phoneme, either [x] or [χ]. As the source for the transcriptions in the practical part of the thesis woorden.org uses the voiceless velar fricative [x] in all positions, this realization will be preserved.
- the quality of [v] and [ʋ] sound differs regionally. In the Netherlands, according to Collins & Mees (2003) [ʋ] tends to shift towards [v] and the contrast between [f] and [v] for the letter “v” diminishes. The letter “w” is realized in Belgium as a voiced

bilabial fricative [β] and in Surinam as a labiovelar approximant [w].

- the voiced glottal fricative [ɦ] may be realized by some speakers in a voiceless manner [h] as an allophone
- voiceless plosives [p], [t] and [k] are not aspirated in a stressed syllable in Dutch
- the "l" letter might be alternatively realized as "dark L" [ɬ] when preceding a consonant or in a word-final position
- the sequences "nj", "sj", "zj", "kj", "tj", and "dj" are usually realized as a single palatal sound: [ɲ], [ɕ], [ʑ], [c͡ç], [c] and [ɟ] respectively
    - single "n" is also realized as [ɲ] when preceding "sj" and "zj" sequences
    - the quality of "sj" and "zj" may vary between palatal [ɕ] and [ʑ], palatalized alveolar [sʲ] and [zʲ] and postalveolar [ʃ] and [ʒ]
    - according to Collins & Mees (2003), p. 193., the place of the "kj" sequence realized as an affricate is post-palatal, marked as [c͡ç̟]
    - the "dj" sequence in word-finally (usually in the diminutive suffix) ultimately realized [c] due to the terminal devoicing, to which it underlies as well
- all the nasal consonants adjust their quality (place of realization) to the following consonant, when being followed by one
- the realization of "r" depends on individual speaker, all the above mentioned alternatives are commonly used as well as alveolar trap [ɾ] and a retroflex approximant [ɻ]. For the purpose of the transcription in this thesis, alveolar trill [r] will be utilized.
- in verbal suffixes "-en", the word-final letter "n" is optional to be either pronounced, therefore both [ən] and [ə] realizations are valid. For the purpose of this thesis, in the transcribed pronunciation the word-final [n] will be marked in brackets.
- the trigraph "sch" is realized as [sx] word-initially and word-medially and [s] word-finally and in suffixes. The letter "x" is realized as [ks] or [gz] and only appears in loanwords. The letter "q" usually appears in "qu" sequence and is realized as [kʊ]
- in loanwords, both the pronunciation and orthography stick to the original language and therefore another phonemes are introduced into Dutch, such as [g], [ʃ], [ʒ], [ʧ], [ʤ], [ʩ], [ʤ] among others

Vowels	Front	Mid-Front	Central	Mid-back	Back
Closed	i				u
			y		
Mid-closed	e:	ɪ ʏ			o:
			ə		
Mid-open	ɛ	ø:			ɔ
Open			a:		ɑ

The Dutch vowels are distinguished into checked or free vowels. Checked-vowels are those, which appear either preceding two consonant or in a syllable written with a monograph. Free-vowels are found in open syllables, or when followed by a single consonant and another vowel or when are written with a digraph with the exception of “ie”, “eu” and “oe” combinations for [i], [ø:] and [u] sounds respectively, as seen in the following chart:

[ɪ] : "i"-checked [i] : "ie", "i"-free

[ʏ] : "u"-checked [y] : "uu", "u"-free [u]: "oe"

[ɛ] : "e"-checked [e:] : "ee", "e"-free [ø:]: "eu"

[ɔ] : "o"-checked [o:] : "oo", "o"-free

[ɑ] : "a"-checked [a:] : "aa", "a"-free

[ə]: unstressed "e", word-final "-e" and “i" and in the suffix "-lijk" [lək]

- the rounded front closed vowel [y] is still labelled this way despite that according to Gussenhoven (1999), p.76. its quality rather suits the character [ʉ]
- the foreign languages’ loanwords which retain their original pronunciation may therefore introduce new vowel into Dutch, particularly the long counterparts of native Dutch short vowels or nasal vowel [ɑ̃], [ɛ̃] and [ɔ̃] – usually in French loanwords.

In the Netherlandic Standard Dutch eleven closing diphthongs exist, namely:

[ɑi]	"ai"	[a:i]	"aai"	[ɑu]	”ou”, ”au”, ”ouw”, ”auw”
[ɛi]	"ei", "ij"	[œy]	"ui"	[e:u]	"eeuw"
[ɔi]	"oi"	[o:i]	"ooi"	[iu]	"ieuw"
[ui]	"oei"			[yu]	"uw"

- the digraph “IJ”/”ij” is considered a single letter (even has its individual placement in the dictionaries) and when capitalised, both the characters are written capital. The combined orthography “Ij” is considered incorrect
- In Belgium, the "ou"/"au" diphthong takes up different quality [ɔʊ] instead of Netherlandic [ɑu]

- as mentioned in the previous chapter Modern Dutch, there is a recent phenomenon called Polder Dutch in which the sounds [e:], [ø:] and [o:] would be shifted towards their respective diphthongs [ei], [øy] and [ou] as well as original diphthongs [ɛi], [œy] and [ɑu] would lower their initial vowel to [a] resulting therefore in [ai], [ay] and [au] respectively. The transcriptions in the practical part of this thesis will however not take these innovations in account.

The Dutch language uses a few diacritic symbols. Diaeresis (¨) is used to distinguish individual vowels from each other so that they would not be mistaken for a diphthong. This usually applies on the interface of morphological unit, such as the word stem and a suffix or a prefix. In compound nouns, a hyphen (-) may divide the individual parts of the compound from each other. An acute accent (´) is used in order to distinguish a stressed word from an unstressed one of the same orthography (e.g. "een" – the indefinite article × "één" – amount of one). Other diacritic markers such as grave accent (`) and a circumflex (^) appear in French loanwords, where the orthography is conserved, and an apostrophe (‘) used for abbreviations.

4.3 English

British English is the only language from the three used for the practical part of the thesis which has alongside the standardized orthography also a prescriptive norm for the pronunciation of the language. For English, the Received Pronunciation will be utilized to enlist the phonetic system of the language and the phonetic transcriptions in the analysis part will be affirmed in concord with those mentioned in the website Oxford Learner's Dictionary. The data for the tables below were collected from Roach (2004), pp. 240-242.

Consonants	Bilabial	Labiodent.	Dental	Alveolar	Postalv.	Palatal	Velar	Glottal
Nasal	m			n			ŋ	
Plosive	p b			t d			k g	(ʔ)
Affricate					tʃ dʒ			
Fricative		f v	θ ð	s z	ʃ ʒ			h (ɦ)
Approximant	(w)				ɹ	j	(w)	
Lateral				l				

[m]	: "m", "-mme"	[n]	: "n", "-ne"	[ŋ]	: "ng"
[p]	: "p"	[t]	: "t", "-tte"	[k]	: "c", "-ck", "ch", "q-"
[b]	: "b"	[d]	: "d", "-de"	[g]	: "g", "gh", "-gue", "-gge"
[f]	: "f"	[s]	: "s", "ci-", "ce-", "sci-", "sce-"		
[v]	: "v"	[z]	: "z", "-ze", "-se"	[ʔ]	: no letter; t-replacement
[θ]	: "th"	[t͡ʃ]	: "ch"	[h]	: "h", "wh-"
[ð]	: "th"	[d͡ʒ]	: "g", "j", "dg", "dj", "du"		
[j]	: "y"	[ʃ]	: "sh", "ch"	[ɹ]	: "r"
[l]	: "l", "-lle"	[ʒ]	: "-ge", "-j", "g"	[w]	: "w", "wh-", "u" in "qu-"

- the post-alveolar approximant [ɹ] is the common realization of "r" in British English (much like retroflex approximant [ɻ] is in General American), however despite its quality is usually denotated simply as [r]. In this thesis, the difference will be preserved and the symbol [ɹ] will be used in the analysis.
- [ɹ] may moreover get dropped altogether word-finally, when precedes word-final "e" and when precedes another consonant as well as vocalized to [ɜ:] after "-u-" or "-e-" in the non-rhotic varieties, to which Received Pronunciation also belongs
- the many possible orthographical realizations of the sounds are given due to the extensive influence of loanwords brought into English vocabulary. Not all

orthographical options will be therefore in the analysis part of the thesis, where the words of Germanic origin only will be discussed

- the sounds [m], [n], [ŋ], [ɹ], [l] may become syllabic [m̩], [n̩], [ŋ̩], [ɹ̩] and [l̩] respectively in unstressed syllables, from which the preceding schwa [ə] is eliminated
    - in front of the above mentioned syllabic consonant is the most common place for [t] to be replaced by the glottal stop [ʔ]
- the voiceless plosives [p], [t] and [k] are aspirated in English in stressed syllables, however not in consonant clusters after "s" and not when sonorants "l", "r", "j" or "w" follow (then the aspiration slightly devoices the following sound)
- the lateral approximant [l] has its velarized allophone [ɬ], which appears mostly when precedes another consonant or word-finally
- the glottal fricative [h] has its voiced allophone [ɦ] between voiced sounds
- the sound [w] is realised as a coarticulated voiced labiovelar approximant
- the voiceless allophone [ʍ] remained as an individual phoneme in Irish and Scottish accents, however the orthography switched from previous "hw-" to recent "wh-"
- the sound sequence on [nð] is usual realized as a geminated dental "n" [n̪n̪]
- the voiceless velar fricative [x] is preserved in Scotland and Ireland, written as "ch" and "gh" respectively, however it is not a native sound to contemporary English, not even in loanwords and place names, where it is usually replaced by [k]
- the letter "x" is realized as [z] word-initially, as [gz] before the stressed vowel and as [ks] in other positions
- the digraph "th" is used for both voiced and voiceless dental fricatives [θ] and [ð]
- the letter "n" ir realized as a velar nasal [ŋ] when precedes velar plosives [k] and [g]

Vowels	Front	Mid-Front	Central	Mid-back	Back
Closed	i:				u:
		ɪ		ʊ	
Mid-closed					
	e		ə		
Mid-open	(ɛ:)		ɜ:		ɔ:
			ʌ		
Open	æ				ɑ: ɒ

In English, seven short and six long vowels exist, namely:

[ɪ] : "i"; "ui"; "a" in "-age"; unstressed "ai", "ei", "ey", "oe" and checked "y"

[e] : "e"; "ea"; "-ar"

[æ] : "a"

[ɒ] : checked "o"; "oi" after [w] and before "r"; "a" after [w], but not before [k], [g] or [ŋ]

[ʌ] : "u" before multiple consonant and when being the final vowel in word; stressed "ou"

[ʊ] : "u", "-ook", "-ood", "ou" in French loanwords

[ə] : unstressed "a", "ea", "i", "o", "ou", "u", "y" and "-e"

[i:] : "e"; "ea"; "ee"; "ae"; "-ie-"; "oe"; "-ei" and "-ey" after consonants

[ɛ:] : "-ear", "-ar", "aer", "air", "eir", "eyr"

[ɑ:] : "a"; "aa"; "ah"; checked "o"; "ear" followed by a consonant

[ɔ:] : "au"; "aw"; "-or"; "-oar"; "a" when preceded by [w] and followed by [r]; "a" prior to "r" and another consonant; stressed "our"

[u:] : "-oe-"; "oeu"; "oo"; stressed "ou"; "ue" after [l] preceded by a consonant and after "r"; "ui" after [j], [r] and [l] preceded by another consonant

[ɜ:] : "-er"; "-ear-" followed by a consonant; "-eur"; "-ir"; "-wor"; "-our"; "-ur"; "-yr"

- the long mid-open vowel [ɛ:] has been traditionally in Received Pronunciation denoted as a centring diphthong [eə], however according to Gimson (2014), the contemporary realization is rather monophthongal
- "-ue-" and "-eau-" are usually pronounced [ju:]
- "-eue", "-ewe", "-ieu" and "-iew" are usually pronounced [ju:], however after [ɪ], [ʃ], [ʒ], [j] and a consonant cluster ending with [l] are realized as [u:] and when preceding "r" and a subsequent vowel as [jʊə]
- short [i] is the common realization of word-final "-ei", "-ey" and "-y"
- in French loanwords, the combinations "oir" and "oy" are usually realized as [wɑ:] and [waɪ] respectively
- the double letter "uu" in Latin loanwords is usually realized as [juə]

- the combination “ui” is mostly realized as [juːɪ] or [ɪ]
    - [wɪ] when it is preceded by a “g”
- in word-final “-gue”, “ue” is not realized at all
- in the sequence “qu”, “u” is realized as [w]

The phonology of Received Pronunciation contains also nine diphthongs, five of which closing and four centring:

[eɪ] : “ay”; “a-“; stressed “ai”; “ea”; “ei”; “ey”

[aɪ] : “i”; “-ie”; “uy”; free “y”; “ui” when preceded by “g”

[ɔɪ] : “oi”; “oy”

[əʊ] : “eau”; free “o”; “oa”; “-oe”; stressed “o”; unstressed “ow”

[aʊ] : “ao”; stressed “ou”; stressed “ow”

[ɪə] : “-er-“ and “-ear-“ followed by a vowel; “eer”; “eir”; “eyr”; “-ier”; “eo” (disyllabic)

[ʊə] : “oor”; stressed “our”; “ur” followed by a vowel (after [ɹ], [ʃ], [ʒ], [j] and a consonant cluster ending with [l]); “ue” and “uu” in loanwords

[ɔə] : “oor”

[eə] : already mentioned above – alternated realization as [ɛː]

All the closing diphthongs are being gradually replaced by long monophthongs. The process is in the furthest stage with [eə] becoming [ɛː] and almost completed with [ʊə] and [ɔə] merging as [ɔː]. The last centring diphthong [ɪə] is gradually becoming [ɪː], however the development is not yet completed and the diphthong realization will be obeyed in the analysis. The diphthong [əʊ] has an allophone starting on a back vowel with a quality varying between [ɔʊ] and [ɑʊ] when the velarized “l” [ɬ] immediately follows.

If the closing diphthongs are combined with a following schwa [ə], five triphthongs are hereby created. The usual manners of pronunciation of the triphthongs ae either as a monosyllabic triphthongs, disyllable diphthong and schwa or their middle vowel may undergo smoothing and therefore would lengthen the initial one. The smoothing process may be performed subsequently again, reducing the initial triphthong into a single vowel. The exact possibilities are shown as follows. The information is collected from Grimson, C (1970).[2]

[aɪə] / [aɪ.ə] / [aːə] > [aː] : “-ir-” + vowel, “-yr-” + vowel, “ie”

[ɑʊə] / [ɑʊ.ə] / [ɑːə] > [ɑː] : “our”, “owr”, “ower”

[əʊə] / [əʊ.ə] / [ə:ə] > [ɜ:] : “oa”, “oe”, “ower”

[eɪə] / [eɪ.ə] / [e:ə] > [e:] : “ayer”; “ao” (in loanwords)

[ɔɪə] / [ɔɪ.ə] / [ɔ:ə] > [ɔ:] : “oi” and “oy” + vowel

The English orthography does not use any diacritics for denomination of a phoneme, instead uses multi-graphs of two or more consonants or vowel. Other symbol found in the language are a hyphen (-) word joining words into compounds and an apostrophe (‘), used usually in possessive suffixes and for abbreviations of auxiliary verbs and negation word “not”.

5 Analysis

In the analysis part of the thesis, the above described unique phenomena in German, Dutch and English phonetics and orthography will be displayed on specific words to determine its realization in the other languages. The features subjected to this analysis include: specific orthography, specific phonemes, equivalent phonetics with different orthography and unique development features in each of the languages. The words are chosen in the language in which the specific unique feature appears and further are enlisted its counterparts in the remaining two languages with respect to the phonemic and morphological structure of the words. The data for the analysis are collected from the official websites of the language institutes responsible for the language regulation, namely: oxfordlearnersdictionaries.com for English, woorden.org for Dutch and duden.de for German, which however during the time when the thesis was written stopped including the phonetic transcriptions for the words and therefore the data from the site easypronunciation.com were used for German instead.

The specific features for the analysis include:

- German affricates [p͡f], [t͡s] and [k͡x] and plosives [f], [s] and [x] produced by the High German Consonant Shift and Phase 3 and 4 products
- absence of voiced velar plosive [g] in Dutch, hence devoiced [ɣ] (allophone of [χ])
- English dental fricatives [θ] and [ð]
- German voiceless palatal fricative [ç] as an Ich-Laut allophone f /x/
- Dutch and German velar fricatives [x], including German Ach-Laut
- Dutch labiodental approximant [ʋ] and English labiovelar approximant [w]
- syllable-forming consonants and terminal devoicing
- "h" and "r" realizations
- glottal stop [ʔ] realization as a means of syllable introduction in German and Dutch and as a [t] substituent in English
- [j] orthography
- [k] orthography
- velarized l [ɫ]
- German sibilants' orthography
- [ks] realizations
- "qu-" realization
- initial [sk] products' realization
- stressed-syllable plosives' aspiration
- word-final "-e" and other central vowel's realizations
- Dutch and German umlaut vowels
- Dutch "-lijk" and "-ig" suffixes
- German "sp" and "st" clusters
- German diphthongs
- Dutch-specific diphthong "ui"
- English centring diphthongs
- Dutch-specific digraph "IJ"

High German Consonant Shift – Phase 1

German	Dutch	English
“laufen” [laʊfn̩]	“loopen” [lo:pə(n)]	“loop” [lu:p]
“Schiff” [ʃɪf]	“schip” [sxɪp]	“ship” [ʃɪp]

German	Dutch	English
“besser” [bɛsɐ]	“beter” [be:tər]	“better” [betə]
“Biss” [bɪs]	“beet” [be:t]	“bite” [baɪt]

German	Dutch	English
“machen” [maxn̩]	“maken” [ma:kə(n)]	“make” [meɪk]
“Koch” [kɔx]	“kok” [kɔk]	“cook” [kʊk]

High German Consonant Shift – Phase 2

German	Dutch	English
“zapfen” [t͡sapf̩n]	“tappen” [tɑpə(n)]	“tap” [tæp]
“Pfeiffe” [p͡faɪfə]	“pijp” [pɛɪp]	“pipe” [paɪp]

German	Dutch	English
“zählen” [t͡sɛ:ln̩]	“tellen” [tɛlə(n)]	“tell” [teɬ]
“Kreuz” [krɔʏt͡s]	“kruis” [krœʏs]	“cross” [krɒs]

German	Dutch	English
“Kind” [kɪnt]	“kind” [kɪnt]	“kid” [kɪd]

High German Consonant Shift – Phase 3

German	Dutch	English
“Tal” [ta:l]	“dal” [dɑɬ]	“dale” [dɛɪɬ]
“mittel-“ [mɪtl̩]	“middel-“ [mɪdəɬ]	“middle” [mɪdl̩]

German	Dutch	English
“beten” [be:tn̩]	“bidden” [bɪdə(n)]	“bet” [bɛt]
“Gold” [gɔlt]	“goud” [χɑut]	“gold” [gəʊld]

High German Consonant Shift – Phase 4 (further changes)

German	Dutch	English
“geben” [ge:bn̩]	“geven” [χe:və(n)]	“give” [gɪv]
“Halbe” [halbə]	“half” [hɑɬf]	“half” [hɑ:f]

German	Dutch	English
“Donner” [dɔnɐ]	“donder” [dɔndər]	“thunder” [θʌndə]

German	Dutch	English
“Vater” [faːtɐ]	“vader” [vaːdər]	“father” [fɑːðə]

German	Dutch	English
“schlagen” [ʃlaːgn̩]	“slagen” [slaːxə(n)]	“slay” [slɛɪ]

German	Dutch	English
“Schmied” [ʃmiːt]	“smid” [smɪt]	“smith” [smɪθ]

Absence of voiced velar plosive [g] in Dutch

German	Dutch	English
“gehen” [geːn̩]	“gaan” [χaːn]	“go” [gəʊ]

English dental fricatives: voiceless [θ] and voiced [ð]

German	Dutch	English
“durch” [dʊəx]	“door” [doːr]	“through” [θruː]
“dies” [diːs]	“dit” [dɪt]	“this” [ðɪs]

German voiceless palatal fricative [ç] as an Ich-Laut allophone of /x/

German	Dutch	English
“nicht” [niçt]	“niet” [niːt]	“not” [nɒt]
“Pflicht” [p͡fliçt]	“plicht” [plɪxt]	“plight” [plaɪt]

German voiceless velar fricative [x] as an Ach-Laut allophone of /x/

German	Dutch	English
“Buch” [bu:x]	“boek” [buk]	“book” [bʊk]
“Nacht” [naχt]	“nacht” [nɑxt]	“night” [naɪt]

Dutch voiceless uvular fricative [χ] as an allophone of /ɣ/

German	Dutch	English
“gähnen” [gɛ:nn̩]	“geeuwen” [χe:ʋə(n)]	“yawn” [jɔ:n]

Dutch labiodental approximant [ʋ]

German	Dutch	English
“Wasser” [vasɐ]	“water” [ʋa:tər]	“water” [wɔ:tə]

English coarticulated labiovelar approximant [w]

German	Dutch	English
“wandern” [vandɐn]	“wandelen” [ʋɑndələ(n)]	“wander” [wɒndə]

Syllable-forming consonants

German	Dutch	English
“Rhythmus” [rɪtmʊs]	(“rhythme”)/”ritme” [rɪtmə]	“rhythm” [rɪθm̩]
“sieben” [zi:bn̩]	“zeven” [ze:və(n)]	“seven” [sevn̩]

“Mantel” [mantl̩]	“mantel” [mɑntəɬ]	“mantel” [mæntl̩]
“Macher” [maxɐ]	“maker” [ma:kər]	“maker” [mɛɪkə]

Terminal devoicing

German	Dutch	English
“hat” [hat]	“had” [ɦɑt]	“had” [hæd]
“Rippe” [rɪpə]	“rib” [rɪp]	“rib” [rɪb]
“Burg” [bʊək]	“burg” [bʏrx]	“burg” [bɜ:g]

Realization of /h/

German	Dutch	English
“Haus” [haʊs]	“huis” [hœʏs]	“house” [haʊs]

Realization of /r/

German	Dutch	English
“rot” [ʀo:t]	“rood” [ʀɔ:t]	“red” [ɹed]

Glottal stop [ʔ] realization

German	Dutch	English
“zu öffnen” [t͡sʊ ʔœfnn̩]	“te openen” [tə ʔo:pənə(n)]	“to open” [tʊ əʊpn̩]
“Butter” [bʊtɐ]	“boter” [bo:tər]	“butter” [bʌtə]/[bʌʔə]

Orthography of /j/

German	Dutch	English
“Jahr” [ja:ʁ]	“jaar” [ja:r]	“year” [jɪə]

Orthography of /k/

German	Dutch	English
“Korn” [kɔən]	“koren” [ko:rən]	“corn” [kɔ:n]
“Keller” [kɛlʁ]	“kelder” [kɛldər]	“cellar” [selə]

Velarized [ɬ] as an allophone of /l/

German	Dutch	English
“halten” [hałtn̩]	“houden” [hɑudə(n)]	“hold” [həʊɬd]

German sibilants’ orthography

German	Dutch	English
“groß” [gro:s]	“groot” [χro:t]	“great” [grɛɪt]
“suchen” [zu:xn̩]	“zoeken” [zukə(n)]	“seek” [si:k]
“lassen” [lasn̩]	“laten” [la:tə(n)]	“let” [let]
“Zahn” [t͡sa:n]	“tand” [tɑnt]	“tooth” [tu:θ]

Realizations of /ks/

German	Dutch	English
“Fuchs” [fʊks]	“vos” [vɔs]	“fox” [fɒks]
“Xylofon”/”Xylophone” [ksɪləfo:n]	“xylofoon” [ksilofo:n]	“xylophone” [zaɪləfəʊn]

Realizations of “qu-“

German	Dutch	English
“Quelle” [kvɛlə]	“wel” [ʊɛɬ]	“well” [weɬ]
“Quartal” [kvarta:l]	“kwartaal” [kʊɑrta:ɬ]	“quarter” [kwɔ:tə]

Reduction of /sk/ consonant cluster

German	Dutch	English
“Schule” [ʃu:lə]	“school” [sxo:ɬ]	“school” [sku:ɬ]
“Fleisch” [flaɪʃ]	“vlees” [vle:s]	“flesh” [fleʃ]

Stressed-syllable aspiration

German	Dutch	English
“Katze” [kʰa͡tsə]	“kat” [kɑt]	“cat” [kʰæt]
“Tag” [tʰa:k]	“daag” [da:x]	“day” [dɛɪ]
“Pein” [pʰaɪn]	“pijn” [pɛɪn]	“pain” [pɛɪn]

Word-final central vowels' realizations

German	Dutch	English
"Rose" [ro:zə]	"roos" [ro:s]	"rose" [rəʊs]
"für" [fy:ɐ]	"voor" [vo:r]	"for" [fɔ:]

Dutch and German umlaut vowels

German	Dutch	English
"Höhle" [hø:lə]	"hol" [ɦɔɬ]	"hole" [həʊɬ]
"Hölle" [hœlə]	"hel" [ɦɛɬ]	"hell" [heɬ]
"fühlen" [fy:ln̩]	"voelen" [vulə(n)]	"feel" [fi:ɬ]
"füllen" [fʏln̩]	"vullen" [fʏlə(n)]	"fill" [fɪɬ]
"Tür" [ty:ɐ]	"deur" [dø:r]	"door" [dɔ:]
"teuer" [tɔʏɐ]	"duur" [dy:r]	"dear" [dɪə]

Dutch "-lijk" and "-ig" suffixes

German	Dutch	English
"nämlich" [nɛ:mlɪç]	"namelijk" [na:mələk]	"namely" [nɛɪmli]
"glücklich" [glʏklɪç]	"gelukkig" [χəlʏkəx]	"lucky" [lʌki]

German “sp“ and “st” clusters

German	Dutch	English
“Sprung” [ʃprʊŋ]	“sprong” [sprɔŋ]	“spring” [sprɪŋ]
“Stern” [ʃtɛɐn]	“ster” [stɛr]	“star” [stɑː]

German diphthongs

German	Dutch	English
“laut” [laʊt]	“luid” [lœʏt]	“loud” [laʊd]
“meist-“ [maɪst]	“mest-“ [mɛst]	“most” [məʊst]
“Bein” [baɪn]	“been” [beːn]	“bone” [bəʊn]

Dutch-specific diphthong “ui”

German	Dutch	English
“Deutsch” [dɔʏt͡ʃ]	“Duits” [dœʏts]	“Dutch” [dʌt͡ʃ]

English centring diphthongs

German	Dutch	English
“Bier” [biːɐ]	“bier” [bir]	“beer” [bɪə]
“Moor” [moːɐ]	“moeras” [murɑs]	“moor” [mʊə]
“bären” [bɛːrn̩]	“baren” [baːrə(n)]	“bear” [beə]

“Eber” [e:bɐ]	“ever” [e:vər]	“boar” [bɔə]

Dutch-specific digraph “IJ”

German	Dutch	English
“weise” [vaɪzə]	“wijs” [ʋɛɪs]	“wise” [waɪs]
“Rhein” [raɪn]	“Rijn” [rɛɪn]	“Rhine” [raɪn]

Conclusion

This undergraduate thesis provides a detailed description of the phonetical development of the three major West Germanic languages – English, Dutch and German – and the innovations are compared across the basic vocabulary of Germanic origin of each of the languages. The research questions assigned in the beginning of the thesis might be answered as follows:

The most important distinctive phenomena of the individual languages would be those which set apart the languages to become individual ones, in other words those which appeared the earliest. For German, the High German Consonant Shift determined the fricative quality of plethora of the voiceless plosives. For Dutch, its sound is defined by the extensive realization of the voiceless velar fricative's allophones and multiple vowels and diphthongs realization switching. For English, the Ingvaeonic nasal spirant law and Great Vowel Shift were the most important in predetermination of the recent system of pronunciation. However, the contemporary evolution might bring up new features to the languages, such as incorporating of anglicisms to German, Polder Dutch innovations in the dominant Dutch dialects and the status of global lingua franca to English.

The reflection of changes in orthography is mostly subjected to the individual phonemic differences. A closer connection between German and Dutch opposing English is evident, however each of the languages retains its unique graphemes and graphemes' combinations, which can be mostly comprehended thanks to the understanding of the phenomena introduced during the language developments.

Generalizing statements can be based on the fact, that the differences in consonants realizations are mostly those of manner rather than those of place (the phonemes could be grouped into three clusters – labial, alveolar and velar – in which they usually remain) and vowels retain its either front-back or low-mid quality as well. By proper understanding of the IPA phonetic tables of consonants and vowels should be sufficient in order to understand the changes between the languages.

The results of this thesis shall be helpful for those willing to understand other West Germanic languages than their native or learned one, as well as foreign language learners who already mastered some of the three languages. Further researches substituting the three languages with any others might be carried out based on the methods used in this thesis.

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Summary in Czech

Tato bakalářská práce se zabývá třemi nejvýznamnějšími západogermánskými jazyky – angličtinou, nizozemštinou a němčinou – a jejich historickým vývojem se zaměřením na jejich fonologický systém a ortografii jednotlivých fonémů.

Pro dostatečný kontext je jazykový vývoj popsán chronologicky od nejdřívější a nejobecnější epochy společného proto-indoevropského jazyka a jsou krátce zmíněny i vlastnosti blízce příbuzných jazyků. Samostatný vývoj hlavních jazyků pro tuto práci, seřazených nejprve němčina, poté nizozemština a nakonec angličtina, je popsán chronologicky dle po sobě navazujících epoch. Zahrnuty jsou též kapitoly o standardizaci těchto jazyků a jejich dialekty či jiné jazykové varianty, zejména kvůli jejich pluricentrické povaze.

Popsané inovace ve fonetických systémech jazyků jsou shrnuty na začátku analýzy, v níž jsou tyto změny demonstrovány na jednoduchých slovech germánského původu, jež tvoří základní slovní zásobu těchto jazyků, a to s ohledem na fonémickou strukturu těchto slov.

Díky historické blízkosti těchto jazyků a jejich společnému původu by mělo porovnání týchž fonetických změn pomoci lepšímu porozumění mezi těmito jazyky navzájem, stejně jako i zevrubnému vysvětlení konkrétních změn, které během jejich historického vývoje nastaly.